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DEPARTMENT OF NATURAL RESOURCES  
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DIVISION OF GEOLOGICAL SURVEY  
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# 1993 REPORT ON OHIO MINERAL INDUSTRIES

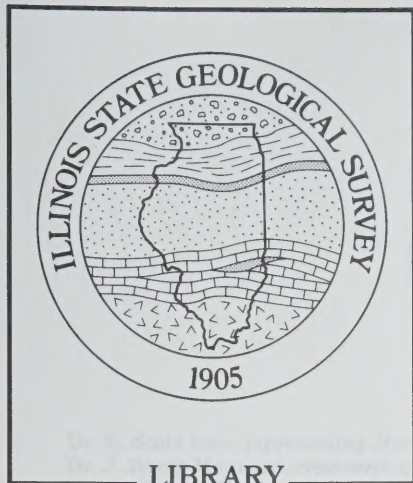
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COAL AND INDUSTRIAL MINERAL OPERATORS

compiled by

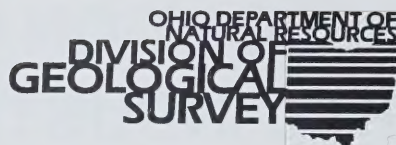
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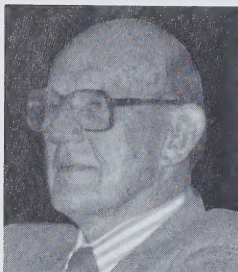
Typesetting and layout: Lisa Van Doren

Cover illustration: View of the American Aggregates Corporation Columbus Limestone quarry in southern Franklin County, looking north toward the Columbus skyline. In the foreground, Ken Coats (right), American Aggregates geologist, and Tommie Deaner (left), general superintendent of the quarry, study an aerial photograph of the area. Most of the stone mined from this quarry is used as aggregate for buildings in downtown Columbus and around the city. However, in 1992, dimension stone was cut from this quarry for renovation of the Ohio State House, which was built of Columbus Limestone in the mid-1800's. Special stone-cutting equipment had to be brought in, and the stone was shipped to Indiana to be cut into slabs for veneer and turned for fluted columns. The Columbus Limestone was much harder than Indiana limestone and took twice as long to cut. More than 2,500 pieces of Columbus Limestone were used in the facade of the atrium and in repairing damaged triglyphs and cornices.

Photo by Michael D. Williams. Information on dimension stone from this quarry is from G. D. McKenzie and R. W. Melvin, 1992, *Guide to the building stones of downtown Columbus: a walking tour*; Ohio Division of Geological Survey Guidebook 6.



## DEDICATION



**ROBERT L. BATES**  
1912-1994


With heavy hearts but fond memories, we dedicate this annual report on Ohio's mineral industries to Dr. Robert L. Bates, Emeritus Professor of Geology at The Ohio State University. Bob Bates was a good friend and strong supporter of the Ohio Geological Survey. Bob was also a good friend of the mineral industries, and did much more than most geologists in the American academic community to keep students of geology focused on the practical and applied aspects this science. His landmark textbook, *Geology of the industrial rocks and minerals*, is still used in economic geology courses. Another work that is on almost every geologist's desk is the *Glossary of geology*, co-edited by Bob Bates and Julia Jackson and published by the American Geological Institute (AGI). Those of us who have been in this profession for a while fondly remember receiving our monthly copy of *Geotimes*, a geological magazine also published by AGI, and turning immediately to Bob's monthly contribution titled, "The Geologic Column." In that column, Bob tickled our funny bones and poked humorously at the dreadful writing of some geologists, some of which he would refer to as "purple prose." Bob was knowledgeable and well read. He even compiled a popular little book of poetry on geological subjects. When Bob would read some of his poetry collection, his style and dry wit would leave you rolling in the aisles. Only two weeks before his death, he was the guest banquet speaker at the annual national meeting of the Association of American State Geologists sponsored by the Ohio Geological Survey.

We will miss you, Bob. You kept us honest, applied, and practical. You greatly elevated the importance of industrial minerals in the geological sciences. You made us laugh at ourselves, and taught us the value of good writing. Thank you, Bob, for enriching our lives.

Thomas M. Berg  
State Geologist and Chief

36





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## FOREWORD

The Ohio Geological Survey strongly believes that Ohio's mineral industries are invaluable to our state's economy and standard of living. To stand behind this belief, it was decided to "jazz up" the 1993 report and make every effort to have the information contained herein available earlier than any previous report. Therefore, this year's report is the first to boast a color cover. We would like to thank American Aggregates Corp., especially Ken Coats and Tommie Deaner, for their cooperation in making this cover possible.

The article in this year's report is on the importance of geologic mapping and was authored by Thomas M. Berg, Survey Chief and State Geologist, and Dennis N. Hull, Assistant State Geologist and Deputy Chief. The article in next year's report will be compiled from information supplied by Ohio's mineral producers. All Ohio operators have received a letter requesting detailed information on the types of end-use products for which their mineral commodities are used. This information will be used in an article on the importance of Ohio's mineral industries in our daily lives. We thank those Ohio mineral producers who have already responded to our request for information.

A few problems with the information supplied in this report have come to our attention. First, the coal seams reported for individual operations in the *Directory of producing coal-mine operators, by county* and the geologic unit listed for individual operations in each specific commodity by-county directories may not be accurate in terms of overall, statewide stratigraphic correlation. Each local coal-mining area has its own terminology for the seams encountered. This terminology may not agree with terminology used by Survey geologists. In past reports we generally have used the terminology reported by the operators on the quarterly coal-mine reports. If no seam is reported, Division of Reclamation permits may be used to determine the seam mined. If there is a question as to which seam is being mined, Survey geologists are consulted. This procedure may lead to discrepancy and confusion. Therefore, until the terminology conforms to the statewide standards of the Survey, it is suggested that seam numbers and formation names used in the report not be used in court cases. In next year's report every attempt will be made to determine the correct coal seam on the basis of statewide correlation. If anyone has any questions, please call me at 614-265-6588. The names of the formations mined by industrial-mineral operators will be changed to conform to statewide standards at a later date.

A second problem is that the 1993 sales and production figures for clay and shale have dropped significantly from 1992 figures. We believe this drop is due to the change in the permitting requirements for sanitary-landfill operations that produce clay and shale for captive use. Many of them are now permitted by the Ohio Environmental Protection Agency and not the Ohio Division of Reclamation. Therefore, I am not notified of these new producers of clay and shale and subsequently do not send them quarterly industrial-mineral reports. To compound the situation, some sanitary-landfill operators that formerly completed quarterly industrial-mineral reports are no longer doing so after their Division of Reclamation permit is changed to an Ohio EPA permit. Because all clay and shale producers in Ohio are required to complete and return quarterly industrial-mineral reports, everything in our power will be done to alleviate this situation.

Another problem has been noticed regarding clay and shale sales and production figures. We believe some of the difference between the figures reported for sales and production lies in operators not reporting their captive-use tonnage as sales. All captive-use tonnage in any mineral commodity should be considered as sales for the purposes of this report. Therefore, considering this problem and the above problem, we believe the reported figures for clay and shale sales and production in 1993 are much lower than in reality.

To end this Foreword on a positive note, the Survey is trying to change the Ohio Revised Code Section 1505.10 to read that coal and industrial-mineral reporting forms will be turned in annually instead of quarterly. We hope only annual forms will be required in 1995.

All of the above changes proposed for this report are made to increase the clarity and usefulness of the report to the public. Any comments on these proposed changes are welcome.

Sherry L. Weisgarber  
Geologist and Mineral Statistician



Errata for  
1992 report  
now available  
upon request



## CONTENTS

	Page
Dedication .....	iii
Foreword .....	v
Geologic mapping—meeting the needs of today, planning for tomorrow, by Thomas M. Berg and Dennis N. Hull .....	1
1993 Ohio mining activities in brief .....	4
Coal .....	7
Industrial minerals .....	18
Limestone and dolomite .....	22
Sand and gravel .....	24
Sandstone and conglomerate .....	28
Clay .....	30
Shale .....	31
Salt .....	32
Gypsum .....	32
Peat .....	32
Oil and gas .....	34
1993 Ohio alphabetical directory of producing coal-mine operators .....	37
1993 Ohio directory of coal-preparation plants and associated facilities, by county .....	44
1993 Ohio directory of producing coal-mine operators, by county .....	50
1993 Ohio alphabetical directory of industrial-mineral mine operators .....	60
1993 Limestone/dolomite companies with sales or production .....	96
1993 Ohio directory of limestone/dolomite operators reporting sales or production, by county .....	97
1993 Sand and gravel companies with sales or production .....	103
1993 Ohio directory of Lake Erie sand and gravel dredgers .....	105
1993 Ohio directory of sand and gravel mining operators reporting sales or production, by county .....	105
1993 Sandstone/conglomerate companies with sales or production .....	117
1993 Ohio directory of sandstone/conglomerate mine operators reporting sales or pro- duction, by county .....	118
1993 Clay companies with sales or production .....	119
1993 Ohio directory of clay-mine operators reporting sales or production, by county .....	120
1993 Shale companies with sales or production .....	121
1993 Ohio directory of shale-mine operators reporting sales or production, by county .....	122
1993 Ohio directory of salt-mine and salt-brining-plant operators reporting sales or pro- duction, by county .....	123
1993 Ohio directory of gypsum-mine operators reporting sales or production .....	123
1993 Ohio directory of peat-mine operators reporting sales or production, by county .....	123
Numerical index of operators of mines shown on 1993 mineral industries map, by com- modity .....	124

## FIGURES

1. Value of coal, nonfuel minerals, and oil and gas in Ohio .....	4
2. Generalized map of the glacial deposits of Ohio .....	5
3. Generalized geologic map and cross section of Ohio .....	6
4. Coal sales in Ohio in 1993, by county .....	7
5. Sales and value of coal in Ohio .....	7
6. Sales of limestone and dolomite in Ohio in 1993, by county .....	22
7. Sales and value of limestone and dolomite in Ohio .....	22
8. Sales of sand and gravel in Ohio in 1993, by county .....	24
9. Sales and value of sand and gravel in Ohio .....	24
10. Sales of sandstone and conglomerate in Ohio in 1993, by county .....	28
11. Sales and value of sandstone and conglomerate in Ohio .....	28
12. Clay sales in Ohio in 1993, by county .....	30
13. Sales and value of clay in Ohio .....	30
14. Shale sales in Ohio in 1993, by county .....	31
15. Sales and value of shale in Ohio .....	31
16. Sales and value of salt in Ohio .....	32
17. Sales and value of gypsum in Ohio .....	32
18. Sales and value of peat in Ohio .....	33
19. Counties producing salt, gypsum, and peat in Ohio in 1993, and their ranking in sales .....	33



## CONTENTS

	Page
20. Production of oil and gas in Ohio .....	34
21. New wells drilled for oil and gas in Ohio in 1993, by county .....	34

## TABLES

1. 1993 Mineral sales and production in Ohio .....	4
2. 1993 Ohio coal production by production-size group and change from 1992 .....	8
3. 1993 Ohio coal production by county and mining method .....	8
4. 1993 Ohio coal production by county and month .....	9
5. 1993 Ohio coal production by county and seam .....	10-11
6. 1993 Disposition of Ohio coal, by county .....	12
7. 1993 Rail shipments of Ohio coal, by county of origin and carrier .....	12
8. 1993 Washed Ohio coal .....	13
9. 1993 Dollar value of coal at mine by county and mining method .....	13
10. 1993 Ohio coal-mine employment, by occupational group and month .....	14
11. 1993 Ohio coal-mine production employment, by county and month .....	14
12. 1993 Ohio coal-mine employment in central preparation plants, central shops, etc., by county and month .....	15
13. 1993 Ohio coal-mine employment in supervisory, technical, and clerical positions, by county and month .....	15
14. 1993 Ohio surface coal-mine reclamation employment, by county and month .....	16
15. 1993 Ohio coal-mine employment in other positions, by county and month .....	16
16. 1993 Wage and salary payments to Ohio coal-mine employees, by county and occu- pational group .....	17
17. 1993 Value of Ohio industrial minerals .....	18
18. 1993 Employment at Ohio industrial mineral operations, by county and commodity .....	20-21
19. 1993 Production of lime from Ohio stone, by county and type .....	22
20. 1993 Ohio limestone and dolomite sales, by county and type .....	23
21. 1993 Ohio sand and gravel sales, by county and type .....	26-27
22. 1993 Ohio Lake Erie sand and gravel production .....	27
23. 1993 Ohio sales of crushed sandstone and conglomerate, by county and type .....	29
24. 1993 Ohio sales of dimension sandstone and conglomerate, by county and type .....	29
25. 1993 Ohio clay sales, by county and type .....	30
26. 1993 Ohio shale sales, by county and type .....	31
27. 1993 Ohio summary of new oil and gas well completions by county .....	35
28. 1993 Ohio summary of new oil and gas well completions by producing zone .....	36
29. Ohio counties and their state mine number abbreviations .....	36

## PHOTOS

View of the American Aggregates Corporation Columbus Limestone quarry .....	cover
Ohio Geological Survey field geologists taking strike and dip measurements on a bedrock outcrop .....	2
Survey geologist compiling field data to create a surficial geology map .....	3
The canal boat <i>E. Moore</i> loading coal .....	9
Nickel Plate Railroad 2-8-4 engine #826 .....	10
The first electric locomotives to be used successfully in a bituminous coal mine .....	11
A group of coal miners pausing for a daily safety talk .....	17
Piqua Stone Products quarry .....	19
Waterloo Coal Company limestone quarry .....	19
A blast at the sandstone quarry of Walter Best, Inc. ....	25
Drag line mining sand and gravel at Olen Corporation .....	25
Wallboard plant and gypsum storage shed of Celotex Corporation .....	33
View from drift opening of Big Five Coal Company mine .....	49
Science teachers learning about geology at the American Aggregates Corporation Columbus Limestone quarry .....	95



## GEOLOGIC MAPPING—MEETING THE NEEDS OF TODAY, PLANNING FOR TOMORROW

by

Thomas M. Berg, State Geologist and Chief,  
and Dennis N. Hull, Assistant State Geologist and Deputy Chief,  
Ohio Department of Natural Resources, Division of Geological Survey

Survey geologists frequently travel to all corners of the state, speaking to university students, school children, garden clubs, mineral societies, professional geological organizations, county commissioners, mineral producers, trade associations, industry CEO's, and a host of other groups on a wide variety of geologic issues. Although the material presented in these talks varies considerably, the geologists rarely fail to emphasize a common point—the need for geologic maps. Without up-to-date geologic information, no society can expect to attain and maintain a high standard of living or an acceptable level of environmental safety. All technologically based civilizations have depended on a knowledge of geology to convert raw materials under their control into economic wealth.

Egyptologists have known about an ancient Egyptian document known as the Turin Papyrus since it was first described in a scholarly paper in 1842. Stored among a dusty collection of artifacts in the Egyptian Museum in Turin, Italy, this fragile, 3,100-year-old papyrus scroll—apparently recovered by archaeologists from the Valley of the Kings in the 1820's—received little attention for nearly 150 years. It was not until 1988 that the full and remarkable significance of the strange depictions and hieratic writings on the deteriorating papyrus were revealed to the modern world by University of Toledo geology professor James A. Harrell. What Harrell recognized and others overlooked, or failed to grasp, was that the Turin Papyrus is a detailed geologic map, the earliest known geologic map, of a 10-mile stretch along Wadi Hammamat in the Eastern Desert of Egypt. Depicted on the color-coded map are topography, surface-drainage features, cisterns, roads, shrines, commercial operations, and the locations of gold- and silver-bearing rocks and bodies of quarryable granite. Such information was essential for acquisition and transportation of materials used in the construction of the sacred temples and royal tombs that were of central importance to Rameses IV and other 20th Dynasty Egyptians. The map was drawn about 1150 B.C., by a scribe named Amennakhte, who may be considered the world's first known geologist!

Early 19th-century Americans, like Amennakhte of old, recognized that if the country was to grow and realize its full economic potential, it would have to take full advantage of available mineral resources. In Ohio, the location of such essential commodities as coal, sandstone, iron ore, limestone, shale, clay, and salt needed to be identified in order to find suitable locations for manufacturing facilities and encourage economic development on the fringes of the frontier. The true location of mineral resources also needed to be determined and publicized in order to protect the public from such deceptive, but tempting, land offerings as coal mines and gold prospects in Cincinnati!

The Ohio Geological Survey and many other eastern state surveys were founded in the 1830's to meet the need for published geologic information. In 1869, Ohio's second state geologist, John Strong Newberry, remarked that the

fruits of the first Ohio Geological Survey's mapping and surveying efforts in 1837 and 1838 "... conclusively demonstrated that the Geological Survey was a producer and not a consumer; that it added far more than it took from the public treasury, and therefore deserved special encouragement and support as a wealth-producing agency." Certainly during the 125 years that have elapsed since Newberry wrote these words, the Ohio Survey has contributed much to the general economic prosperity of Ohioans and the state's \$1.7-billion-per-year mineral industries.

Today, however, the state geological surveys and the U.S. Geological Survey face a severe geologic-mapping crisis. As a nation, we have fallen behind in the production of geologic maps and have not kept up with the burgeoning need for them. Today's critical ground-water, fossil-fuel, mineral-resource, and environmental issues require accurate and up-to-date geologic information—almost always in the form of geologic maps—to arrive at viable solutions. To compound the problem, many college and university geology departments around the nation have de-emphasized classical field geologic mapping, and there are fewer and fewer graduates in geology who know how to make geologic maps. This national apathy for geologic mapping is regrettable when one considers the many problems and situations that could have been avoided or greatly alleviated if geologic map information had been available and/or used. For example:

❖ **LANDSLIDES** — In 1980, the U.S. Geological Survey estimated the annual cost of landslide damage in Hamilton County, Ohio, to be \$5,170,000. On a per capita basis, the cost of landslide damage in Hamilton County is greater than that of any other county in the nation. Citizens pay for most of the loss in insurance premiums and taxes. Geologic mapping can identify landslide-prone areas which should be avoided or specifically considered in construction design. Division of Geological Survey mapping in Hamilton County has delineated geologic units that are prone to sliding. The cost of this mapping was about \$89,000—less than 2 percent of the annual cost of landslide damage in the county!

❖ **HAZARDOUS WASTE** — The cost of cleaning up Ohio's Superfund sites has been estimated at \$16 million each. One estimate of the total cost for cleaning up all improperly disposed hazardous waste in Ohio is \$5.8 billion. For about \$2.5 million (about 1/2000th the cost to remediate the Superfund sites), the Ohio Geological Survey could produce geologic maps which would identify areas where future hazardous-waste disposal would impose unacceptable environmental risk.

❖ **LAND-USE PLANNING AND RESOURCE POTENTIAL** — In a major metropolitan area, where close-in supplies of coarse gravel are becoming rarer and rarer, nearly 14 million tons of high-quality coarse gravel located next to an active sand



and gravel producer were lost forever to a housing development. Detailed geologic mapping, carried out in conjunction with cooperative land-use planning among zoning officials, developers, and mineral producers, might have allowed much of this resource to be produced as aggregate, and then developed for housing after reclamation.

The construction of a geologic map is an extremely complex process requiring years of university training and on-the-job experience. It also requires a person with a unique kind of perseverance and patience. Mapping geologists frequently spend many months or even years on a single map, drawing the boundaries between rock formations, plotting coal seams, tracking the limits of glacial deposits, delineating the configuration of deep subsurface rock units, showing the extent of fracture systems, and unraveling many other geologic phenomena.

In making a geologic map, the geologist is delineating four-dimensional (width, breadth, depth, time) features on a two-dimensional (width, breadth) surface. Consider for example, a **bedrock geology map**. Such a map shows the geologist's interpretation of the surface distribution and configuration of rock units over a particular area as if all unconsolidated materials (glacial drift and/or soils) had been removed. In making a bedrock geology map, a geologist must be able to examine an outcrop or a drill-hole core and interpret the source of the original sediment, the transporting mechanism, the local depositional setting, the



Ohio Geological Survey field geologists using a Brunton compass to take strike and dip measurements on a bedrock outcrop in York Township, Athens County. Such information, together with stratigraphic, thickness, elevation, and location data, is used by the geologists in the construction of a bedrock geology map. Bedrock geology maps are used to identify (1) mineral resources such as limestone, dolomite, coal, sandstone, shale, and clay; (2) landslide-prone rock units; and (3) aquifers.

implications for the whole depositional basin, the degree of lateral homogeneity or heterogeneity, the history of cementation and postdepositional alteration, and the history of erosion and weathering. The elevations of contacts between bedrock units at various locations are placed into a digital database for computer generation of contour maps, called **structure maps**, showing elevational trends on a given horizon. Structure maps used in conjunction with **bedrock topography maps**—contour maps of elevations on the buried rock surface—are then synthesized to produce a bedrock geology map.

Bedrock geology maps are of inestimable value to mineral explorationists and producers. For example, bedrock

mapping in limestone and dolomite terrains provides a wealth of information critical to the successful location and development of new carbonate-rock resources, which are used in everyday products ranging from cement to lipstick. Bedrock mapping also provides important new data that are exceedingly beneficial in expanding existing quarry operations. By knowing the three-dimensional geologic framework of a specific site or a large region, the limestone or dolomite producer is armed with a predictive capability that will save thousands or even millions of dollars when planning new operations. For example, vertical and lateral stratigraphic relationships of rock units are determined by bedrock geologic mapping. Identification of breaks (unconformities) in sedimentary rock successions allows accurate prediction of missing units at some distance from existing operations. Determination of lateral changes in limestone or dolomite units permits accurate prediction of changes in rock quality and can save tremendous amounts of money and time during exploration for high-quality materials. Changes in thickness of quarry layers can be predicted through the development of **isopach maps**—contour maps showing the thickness of a rock unit or group of units.

Bedrock geologic mapping also provides an accurate picture of structural fabrics such as fractures, faults, and folds that affect the spatial distribution and engineering characteristics of quarry layers. A solid understanding of the structural geology of an area is critically important to the development of an efficient mining plan. An understanding of the three-dimensional arrangement and intersection of bedding surfaces and fractures is important in predicting the movement of ground water in a quarry operation.

Another product resulting from bedrock geologic mapping is the **depth-to-bedrock** or **drift thickness map**—a contour map depicting the thickness of glacial and other unconsolidated materials overlying the bedrock. Such maps are pivotal in determining whether or not it is cost effective to open a new quarry and remove a thickness of surficial materials to get at underlying limestone or dolomite.

The Division of Geological Survey distributes many other types of geologic and nongeologic maps that are beneficial to all Ohio mineral industries. Some of these maps include:

- topographic and planimetric 7.5-minute quadrangle maps
- surficial materials/geology maps
- abandoned-underground-mine maps
- oil and gas well location maps
- digital deep-well and structure contour maps
- sand and gravel resource maps
- base maps of Ohio at various scales
- electric power transmission system in Ohio map
- Quaternary geology maps
- geologic map of Ohio
- mineral industries map of Ohio
- Ohio landform map
- oil and gas fields of Ohio map
- oil and gas pipelines in Ohio map
- Lake Erie shoreline recession maps
- Coal outcrop maps
- Coal thickness maps

Although the Division of Geological Survey has been mapping and reporting on the geology of Ohio since 1837, much of the geology of the state remains to be mapped in accordance with modern standards for reconnaissance and detailed mapping. To address this problem, the Ohio Gen-





Survey geologist compiling field data and other information to create a surficial geology map. Surficial geology maps are used to identify (1) areas suitable for solid-waste disposal; (2) sand, gravel, and peat resources; (3) landslide-prone materials; and (4) materials subject to earthquake-induced liquefaction.

eral Assembly reapportioned the existing mineral severance tax in 1981 to fund statewide geologic mapping by the Ohio Survey. Through this new source of revenue, the Survey was able to hire an adequate number of new geologists and cartographers to begin mapping the bedrock, surficial materials, and mineral resources of the state in a comprehensive manner. Unfortunately, declining coal production, economic stagnation, and inflation severely reduced the buying power of severance-tax revenues throughout the 1980's, precipitating a severe reduction in geologic map production.

The Survey streamlined and economized the statewide mapping program in 1989 in response to fewer funds for developing and publishing geologic information and to increase the rate at which mapping information was developed and released to the public. Using computer-assisted reconnaissance mapping techniques, an open-file method (as opposed to formal publication) for release of most geologic information, and funding assistance from several federal and state grants, the Survey mapping program is producing up to 800 new maps each year. Regrettably, even though the geologic mapping program is being operated with unprecedented efficiency and belt tightening, produc-

tion of several critically needed types of mapping products, such as surficial materials maps and derivative industrial minerals maps, and solid-waste disposal suitability maps, will require additional program resources.

In an effort to address the need for geologic mapping in the United States, the Association of American State Geologists, together with the U.S. Geological Survey, drafted a national geologic mapping bill, which included authorization of more than \$60,000,000 in federal funds to be made available to the 50 states over a four-year period as matching funds for geologic mapping. The bill was enacted by Congress as the National Geologic Mapping Act of 1992 (NGMA). However, the 1993 federal appropriations bill provided the Department of the Interior (parent agency of the U.S. Geological Survey) only \$1.3 million to fund state survey cooperative mapping through the NGMA—an amount of money no greater than had been allocated for state mapping before the NGMA.

It is both ironic and potentially tragic that funding for geologic mapping is decreasing at a time when the need and demand for such information are increasing. Across the state, mineral producers are running low on reserves and seeking new deposits or information to evaluate a potential acquisition; oil and gas producers are seeking new reserves in inadequately defined geologic units; solid-waste-disposal districts are searching for suitable sites for waste disposal; state officials are confronting the issue of low-level radioactive waste; and homeowners are worrying about subsidence due to unmapped mines below their properties.

Geologic map information compiled by the state geological surveys provides a solid foundation for rational, cost-effective decision-making. We encourage our mineral industries to consider the future of Ohio's mineral and fossil-fuel resources and, most importantly, the future that we will leave our grandchildren and great-grandchildren—and support geologic mapping today.

*For more information on geologic maps and other mapping products from the Ohio Geological Survey, please contact:*

*Ohio Department of Natural Resources  
Division of Geological Survey  
Geologic Records Center  
4383 Fountain Square Drive, Bldg. B-2  
Columbus, Ohio 43224-1362  
614-265-6585*

## 1993 OHIO MINING ACTIVITIES IN BRIEF

Reports were filed in 1993 for 292 coal-mining operations, including 16 mines with their own coal-washing facility. Coal production was reported from 194 of these 292 operations. Reports also were filed for 53 separate coal-washing plants and associated facilities. Of 672 industrial-mineral-mining operations known to be operating in 1993, 536 operations were active. A total of 43 mines reported production of multiple mineral commodities. Of this total, 29 mines reported production of multiple industrial minerals, 10 mines reported production of multiple industrial minerals and coal, and 4 mines reported production of coal and one industrial mineral. There were 695 new wells completed for oil and gas in 1993, of which 532 were productive and 163 were dry.

The total value<sup>1</sup> of coal was \$759,130,295 in 1993; the

value of oil and gas was \$476,764,511; and the total value<sup>1</sup> of all nonfuel industrial minerals was \$511,650,285 in 1993.

TABLE 1. — 1993 Mineral sales and production in Ohio

Commodity	Sales <sup>1</sup>	Production <sup>2</sup>
Coal	27,668,810 tons	27,585,575 tons
Limestone and dolomite	60,705,114 tons	61,784,547 tons
Sand and gravel	47,769,475 tons	47,972,399 tons
Salt	3,562,352 tons	3,871,260 tons
Sandstone and conglomerate	1,933,259 tons	2,053,855 tons
Clay	1,711,083 tons	1,768,356 tons
Shale	1,301,416 tons	1,302,935 tons
Gypsum	233,172 tons	233,172 tons
Peat	17,833 tons	11,029 tons
Gas	<sup>3</sup>	135,938,848 MCF <sup>4</sup>
Oil	<sup>3</sup>	8,282,023 barrels

<sup>1</sup>Includes reported and estimated values. Some operations reporting sales did not report a value for those sales. A statewide average price per ton was calculated for each industrial mineral commodity based on sales for which the value was reported. A countywide average price per ton was calculated for coal based on sales for which the value was reported and method of production. These calculated averages were used to estimate the value of the sales for which the actual values were not reported.

<sup>2</sup>The production figures for the industrial minerals are estimates. Many operators do not know actual production. Some operators report estimates, other operators do not report any production. For those operators who do not report production, production is assumed to equal sales.

<sup>3</sup>Figure not available.

<sup>4</sup>Thousand cubic feet.

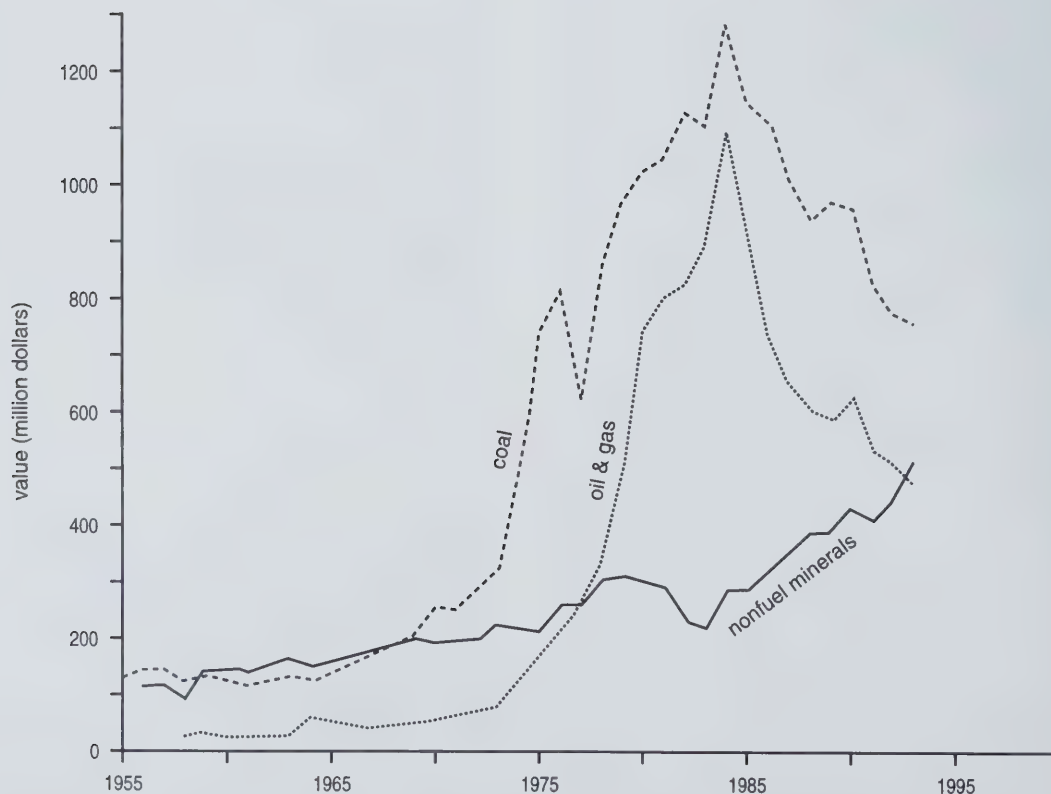


FIGURE 1.—Value of coal, nonfuel minerals, and oil and gas in Ohio.



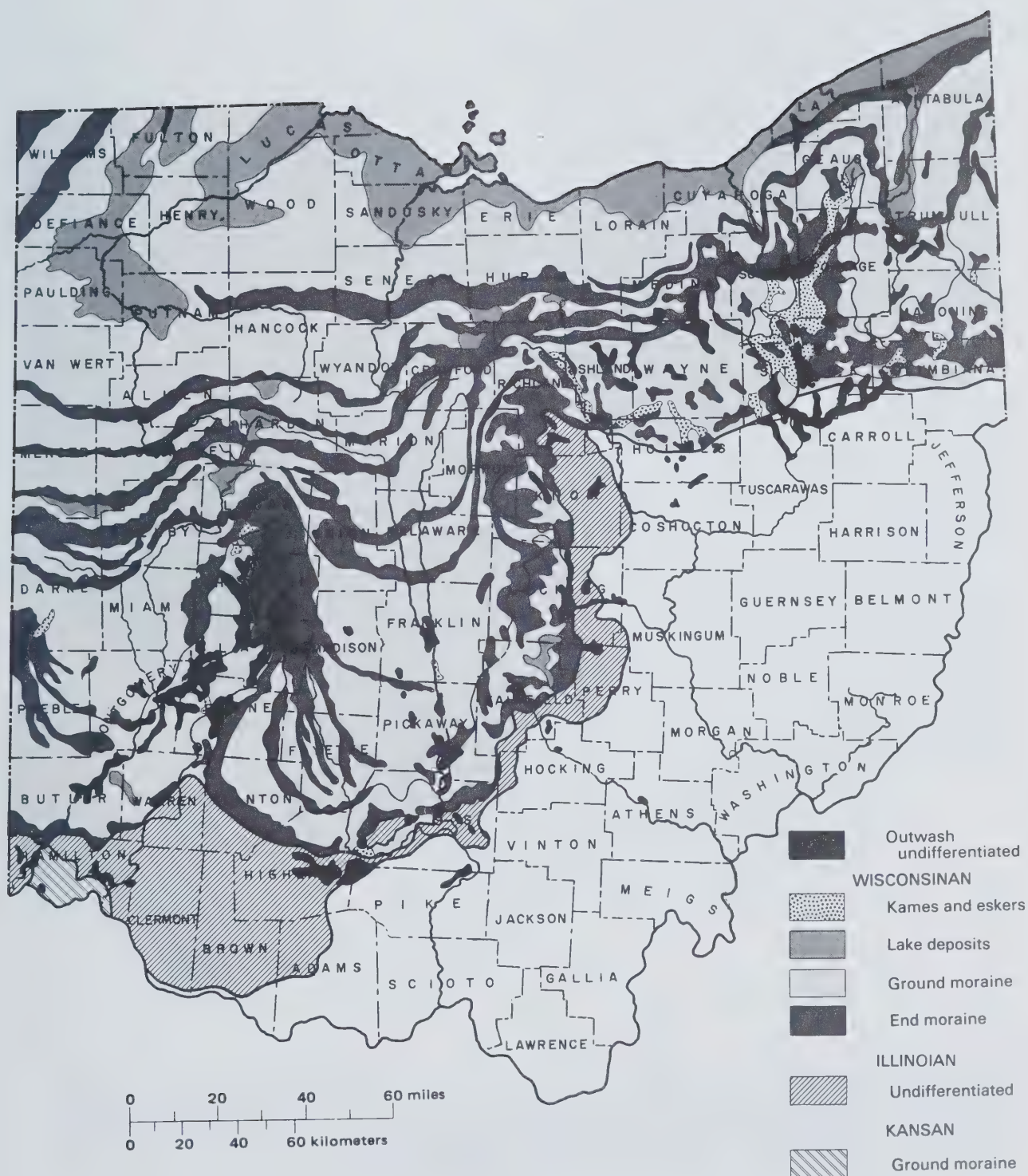


FIGURE 2.—Generalized map of the glacial deposits of Ohio. Continental glaciers advanced over the Ohio landscape several times during the Ice Age. These glaciers deposited unconsolidated materials on top of the bedrock over nearly two-thirds of the state. Most of Ohio's sand and gravel production comes from kames, eskers, and outwash, which were deposited by meltwater from the glaciers. Other glacially derived industrial minerals in Ohio include peat and clay.



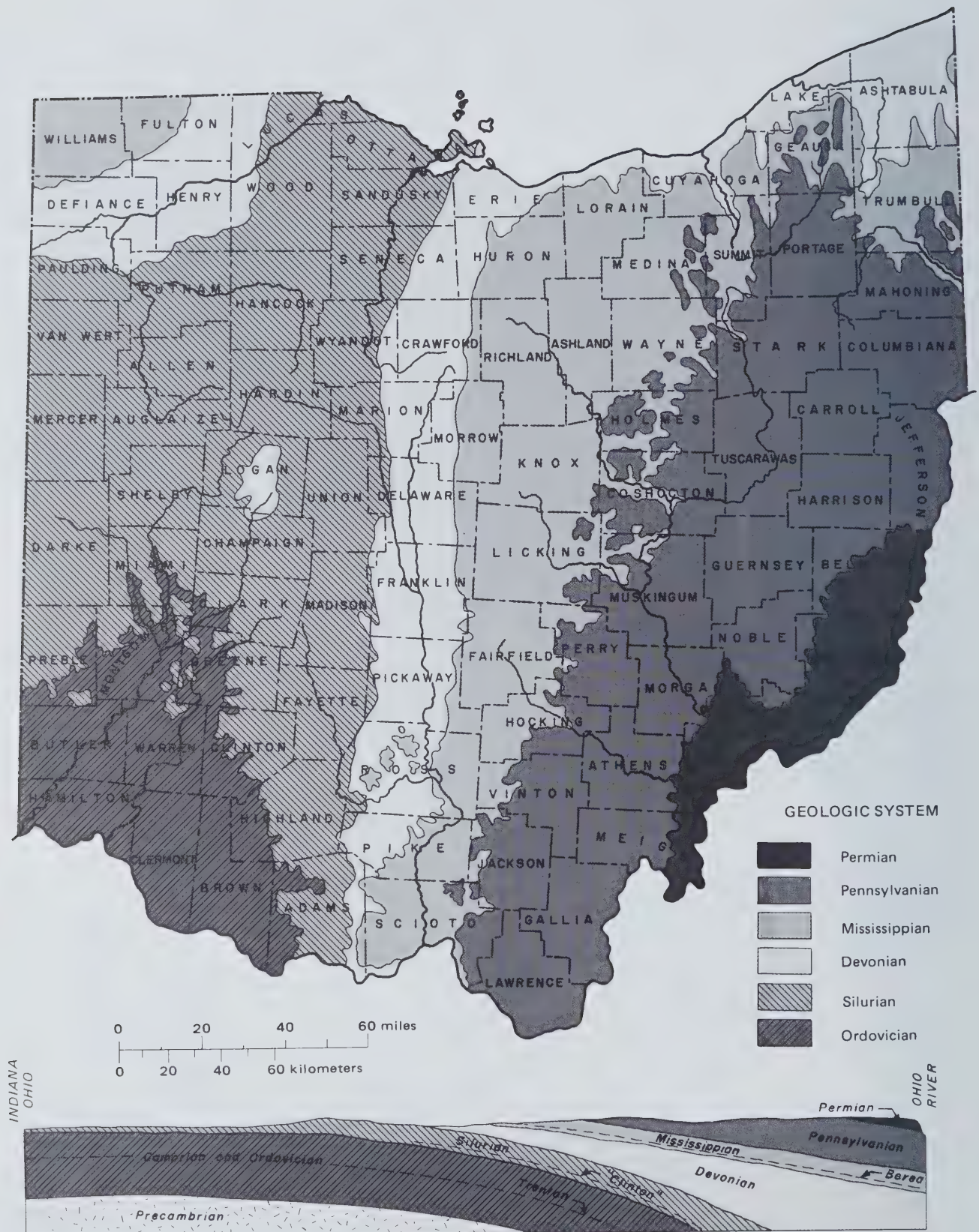


FIGURE 3.—Generalized geologic map and cross section of Ohio. Mineral production occurs throughout Ohio and from every geologic system from the Cambrian to the Permian. Coal, limestone and dolomite, sandstone and conglomerate, shale, clay, gypsum, salt, and oil and gas are produced from Ohio bedrock.



## COAL

Coal was produced by 81 companies at 192 mines in 21 Ohio counties during 1993. Production decreased 0.6 percent from 1992, totalling 27,585,575 tons in 1993; 17,113,249 tons (62.0 percent of total production) were produced at 183 surface mines, and 10,472,326 tons (38.0 percent of total production) were produced at 9 underground mines. Of 26 coal-producing states, Ohio ranked 12th in 1993. The top five states, in descending order of production, are Wyoming, Kentucky, West Virginia, Pennsylvania, and Texas. These five states produced 63.8 percent of the nation's coal in 1993. Ohio produced 3 percent of the nation's coal in 1993. The top five coal-consuming states, in descending order of consumption, are Texas, Indiana, Ohio, Pennsylvania, and Kentucky. These five states used 33.6 percent of the total coal consumed by all 50 states in 1993.<sup>2</sup>

In comparison to 1992, there were 4 more mines reporting production of 50,000 tons or less, 1 fewer mine producing between 50,000 and 500,000 tons, 2 fewer mines producing between 500,000 and 1,000,000 tons, and the same number of mines reporting production of 1,000,000 tons or greater; there was a net increase of 1 mine in 1993.

The five leading counties for 1993 production were Belmont, Vinton, Meigs, Harrison, and Tuscarawas Counties; these counties produced 60.1 percent of the 1993 total production. A total of 27,668,811 tons of coal were sold in 1993; total value<sup>3</sup> was \$759,130,295. The average price per ton of all coal sold was \$27.44; surface-mined coal averaged \$26.00 per ton and underground-mined coal averaged

\$29.75 per ton.

In underground mining, 33.4 percent of the coal was mined by continuous miner and 66.6 percent was produced by longwall mining; no coal was produced by conventional underground mining in 1993. In surface operations, 6.0 percent of the coal produced was auger mined, and 94.0 percent was surface mined.

The Pittsburgh (No. 8) coal was the most heavily mined seam, followed by the Meigs Creek (No. 9), Clarion (No. 4A), Middle Kittanning (No. 6), and Lower Kittanning (No. 5) seams. Coal produced from these five seams constituted 78.8 percent of the total 1993 production.

A total of 17,274,721 tons of washed coal were reported in 1993. Reports from 16 coal-washing plants indicate an average 30.5 percent loss in washing.

Trucking was the primary means of coal disposition, carrying 53.4 percent of the total sales. Conveyor belts carried 22.9 percent, rail transported 13.0 percent, and water transport carried 10.7 percent of the coal sold in 1993. A total of 1.2 percent of the coal produced was reported as stored.

The total average annual employment reported in 1993 was 4,116 employees; 2,391 of these were production employees. Production employees worked an average of 159 days producing coal in 1993. The average annual wage earned by all production employees was \$35,734, based on those employees for whom wages were reported. The average annual wage for surface-mine production employees was \$32,566, and the average annual wage for underground-mine production employees was \$41,252. Wages earned by all employees totalled \$158,352,333 in 1993.

<sup>2</sup>Information from U.S. Department of Energy, Energy Information Administration.

<sup>3</sup>Includes reported and estimated values. See footnote 1, p. 4.



FIGURE 4.—Coal sales in Ohio in 1993, by county.

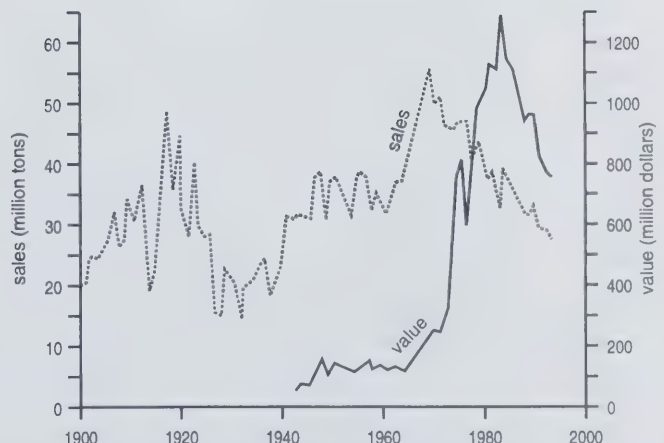


FIGURE 5.—Sales and value of coal in Ohio.

TABLE 2. — 1993 Ohio coal production by production-size group and change from 1992

Production-size group	1993		Change from 1992 (short tons)
	Number of mines reporting	Production (short tons)	
Under 25,000 tons	84	766,419	+ 43,261
25,000 to 49,999 tons	27	948,245	– 454,336
50,000 to 99,999 tons	29	2,260,369	– 76,226
100,000 to 249,999 tons	30	4,408,094	– 739,666
250,000 to 499,999 tons	13	4,522,311	+ 2,383,535
500,000 to 999,999 tons	3	2,194,955	– 1,471,371
1,000,000 tons and over	6	12,485,182	– 1,502,685
TOTAL	192	27,585,575	– 1,817,488

TABLE 3. — 1993 Ohio coal production by county and mining method

County <sup>1</sup>	All methods (short tons)	Total number of mines	Underground					Surface			
			Number of underground mines reporting	Production (short tons)				Number of surface mines reporting	Production (short tons)		
				Total underground	Longwall	Conventional	Continuous miner		Total surface	Strip	Auger
Belmont	5,904,179	21 <sup>2</sup>	1	3,968,101	3,075,487		892,614	20 <sup>2</sup>	1,936,078	1,771,049	165,029
Carroll	107,572	7						7	107,572	107,532	40
Columbiana	1,131,047	14	3	490,772			490,772	11	640,275	595,962	44,313
Coshocton	1,347,597	14						14	1,347,597	1,263,065	84,532
Guernsey	402,250	8						8	402,250	364,205	38,045
Harrison	2,447,095	13	1	1,175,173			1,175,173	12	1,271,922	1,170,770	101,152
Holmes	153,635	5						5	153,635	153,635	
Jackson	1,250,717	9 <sup>2</sup>						9 <sup>2</sup>	1,250,717	1,250,717	
Jefferson	1,673,447	22	1	261,792			261,792	21	1,411,655	1,250,576	161,079
Lawrence	9,611	1						1	9,611	9,611	
Mahoning	4,837	2						2	4,837	4,837	
Meigs	2,895,853	2	2	2,895,853	2,453,309		442,544				
Monroe	827,377	1	1	827,377	765,987		61,390				
Morgan	46,549	1 <sup>3</sup>						1 <sup>3</sup>	46,549	46,549	
Muskingum	2,350,330	3 <sup>2</sup>						3 <sup>2</sup>	2,350,330	2,240,141	110,189
Noble	1,065,855	8						8	1,065,855	1,054,230	11,625
Perry	395,321	7						7	395,321	325,116	70,205
Stark	230,340	6						6	230,340	230,340	
Tuscarawas	2,388,339	39						39	2,388,339	2,144,064	244,275
Vinton	2,950,455	9 <sup>2</sup>	1 <sup>4</sup>	853,258	683,015		170,243	9 <sup>2</sup>	2,097,197	2,097,197	
Wayne	3,169	1						1	3,169	3,169	
TOTAL	27,585,575	192	9	10,472,326	6,977,798	0	3,494,528	183	17,113,249	16,082,765	1,030,484

<sup>1</sup>Production from mines operating in more than one county was evenly split between the counties involved unless a by-county breakdown was provided by the operator.

<sup>2</sup>Does not include mines extending into this county from adjoining counties.

<sup>3</sup>This mine extends into Morgan County from Noble County and is not included in the total number of mines.

<sup>4</sup>This mine extends into Vinton County from Meigs County and is not included in the total number of mines.



TABLE 4. — 1993 Ohio coal production by county and month

County <sup>1</sup>	Production (short tons)												
	Total annual	January	February	March	April	May	June	July	August	September	October	November	December
Belmont	5,904,179	474,339	196,630	553,020	516,561	364,749	453,941	527,333	358,966	617,400	672,841	538,882	629,517
Carroll	107,572	16,724	15,566	12,023	10,111	7,944	8,806	6,381	6,651	4,951	5,527	6,702	6,186
Columbiana	1,131,047	110,357	95,741	117,056	87,806	82,378	81,902	82,850	93,150	99,166	95,590	84,947	100,104
Coshocton	1,347,597	115,799	109,003	117,810	108,300	88,332	100,352	122,248	129,871	128,437	128,386	109,116	89,943
Guernsey	402,250	51,807	53,905	38,819	23,811	16,962	22,223	27,582	32,478	32,654	33,195	37,546	31,268
Harrison	2,447,095	204,978	218,751	231,337	245,164	245,133	180,385	166,211	185,239	166,669	201,647	217,187	184,394
Holmes	153,635	17,415	11,692	10,156	16,597	7,451	5,749	10,232	13,649	13,203	12,733	13,497	21,261
Jackson	1,250,717	110,864	90,743	78,266	81,369	88,083	90,782	106,620	140,596	84,262	127,425	124,839	126,868
Jefferson	1,673,447	156,026	137,821	146,471	140,904	131,105	135,789	101,103	157,275	144,822	135,863	151,641	134,627
Lawrence	9,611	0	0	3	369	324	1,000	2	1,531	2,964	1,256	1,602	560
Mahoning	4,837	733	146	311	0	0	0	0	0	574	0	1,651	1,422
Meigs	2,895,853	345,751	363,524	369,334	333,845	240,991	254,537	127,260	90,660	124,056	253,016	250,070	142,809
Monroe	827,377	0	0	0	0	0	57,846	178,886	0	0	175,238	229,353	186,054
Morgan	46,549	0	0	0	0	0	0	0	0	0	0	12,127	34,422
Muskingum	2,350,330	210,175	216,259	246,100	211,724	185,751	165,243	176,812	250,381	141,097	200,044	207,882	138,862
Noble	1,065,855	78,535	82,467	77,410	57,848	80,266	104,668	87,647	86,811	132,238	126,541	76,896	74,528
Perry	395,321	31,827	26,790	31,651	32,232	16,441	20,898	26,278	42,840	48,818	41,468	37,167	38,911
Stark	230,340	12,424	17,486	17,131	17,830	22,536	15,721	15,964	20,933	20,053	25,977	17,585	26,700
Tuscarawas	2,388,339	197,032	200,382	219,141	203,590	187,419	172,111	172,351	201,367	180,685	199,623	217,222	237,416
Vinton	2,950,455	309,579	341,144	350,885	330,707	345,096	349,525	218,024	211,887	226,673	85,224	84,933	96,778
Wayne	3,169	1,051	2,118	0	0	0	0	0	0	0	0	0	0
TOTAL	27,585,575	2,445,416	2,180,168	2,616,924	2,418,768	2,110,961	2,221,478	2,153,784	2,024,285	2,168,722	2,521,594	2,420,845	2,302,630

<sup>1</sup>Production from mines operating in more than one county was evenly split between the counties involved unless a by-county breakdown was provided by the operator.



The canal boat *E. Moore* loading coal from the tippie of the Trenton mine, located on the west bank of the Ohio and Erie Canal at Tuscarawas (formerly Trenton), Warwick Township, Tuscarawas County. Circa 1889. Photo courtesy of The University of Akron Archives, Canal Society of Ohio collection.

TABLE 5. — 1993 Ohio coal production

County <sup>1</sup>	Production									
	Total	Quakertown (No. 2)	Lower Mercer (No. 3)	Upper Mercer (No. 3A)	Brookville (No. 4)	Winters	Clarion (No. 4A)	Lower Kittanning (No. 5)	Strasburg (No. 5A)	Middle Kittanning (No. 6)
Belmont	5,904,179									
Carroll	107,572									
Columbiana	1,131,047				49,235	2,774		13,335		13,338
Coshocton	1,347,597							36,504		126,520
Guernsey	402,250							428,504		919,093
Harrison	2,447,095									39,975
Holmes	153,635				17,355					
Jackson	1,250,717	20,351	13,543		124,722	40,305	450,123	34,134		102,146
Jefferson	1,673,447							423,039		123,757
Lawrence	9,611						9,611			8,884
Mahoning	4,837		1,975		2,862					
Meigs	2,895,853						2,895,853			
Monroe	827,377									
Morgan	46,549									
Muskingum	2,350,330									36,562
Noble	1,065,855									
Perry	395,321							10,305		385,016
Stark	230,340			4,926	89,294			78,821	4,989	51,711
Tuscarawas	2,388,339			116,144	60,246			585,686	690	874,712
Vinton	2,950,455	2,744	122,097		495,192	205,922	1,046,605	615,648		376,883
Wayne	3,169									3,169
TOTAL	27,585,575	23,095	137,615	121,070	838,906	249,001	4,402,192	2,225,976	5,679	3,061,766

<sup>1</sup>Production from mines operating in more than one county was evenly split between the counties involved unless a by-county breakdown was provided by the operator.

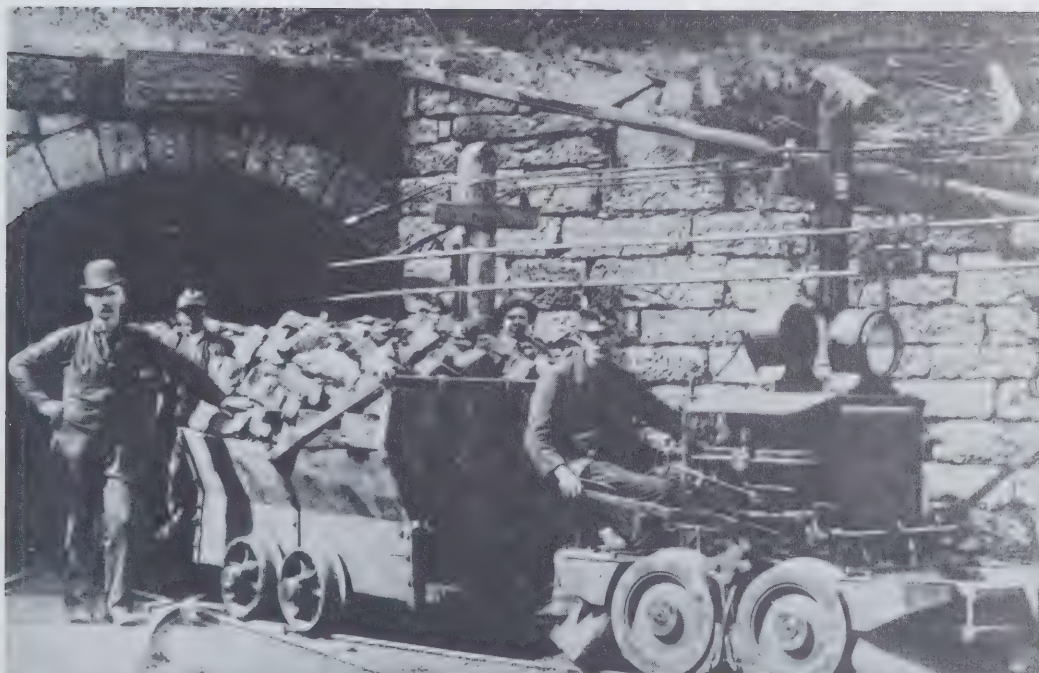


Nickel Plate Railroad 2-8-4 engine #826 about to cut away from the caboose and back onto pick-up tracks to fill out the train's tonnage with coal from the Saginaw Mining Company Saginaw mine near St. Clairsville, Belmont County, before heading to Adena and Pine Valley, in Jefferson County. *Circa 1956. Photo courtesy of J. J. Young, Jr.*



by county and seam

(short tons)										County
Lower Freeport (No. 6A)	Upper Freeport (No. 7)	Mahoning (No. 7A)	Anderson	Harlem	Pittsburgh (No. 8)	Pomeroy-Redstone (No. 8A)	Meigs Creek (No. 9)	Waynesburg (No. 11)	Washington (No. 12)	
2,449 336,790	18,622 358,261	220,963		59,828	4,372,011		1,031,736	493,708	6,724	Belmont
	240,515		3,525		105,529		12,706			Carroll
1,175,173	15,701			22,089	1,190,425	32,673	11,034			Columbiana
8,780	46,097 269,778	7,987		79,281	1,082,055	219,731	5,731			Coshocton
										Guernsey
										Harrison
										Holmes
										Jackson
										Jefferson
										Lawrence
					827,377					Mahoning
	389						46,549			Meigs
	11,089						2,313,379			Monroe
							1,054,766			Morgan
599										Muskingum
13,793	737,068									Noble
3,690	81,674									Perry
										Stark
										Tuscarawas
										Vinton
										Wayne
1,541,274	1,779,194	228,950	3,525	161,198	7,577,397	252,404	4,475,901	493,708	6,724	TOTAL



The first electric locomotives to be used successfully in a bituminous coal mine in the United States were built by the Jeffrey Manufacturing Company of Columbus, Ohio, in 1888. These locomotives were installed at the Shawnee & Ironpoint Coal & Iron Company Ironpoint mine in Salt Lick Township, Perry County. *Circa 1890.* Photo courtesy of The Ohio Historical Society.

## 1993 OHIO MINERAL INDUSTRIES REPORT

TABLE 6. — 1993 Disposition of Ohio coal, by county

County <sup>1</sup>	Number of mines	Disposition <sup>1</sup> (short tons)						Stored
		Total <sup>2</sup>	Rail	Water	Truck	Conveyor	Unspecified/ other	
Belmont	21 <sup>3</sup>	6,036,736	3,517,030	392,537	2,127,169			37,849
Carroll	7	109,423			109,423			
Columbiana	14	1,134,033			1,134,033			
Coshocton	14	1,356,896		318,492	1,038,404			38,705
Guernsey	8	404,027		26,029	377,998			181
Harrison	13	2,435,886	51,959	690,092	1,693,835			54,772
Holmes	5	153,635			153,635			
Jackson	9 <sup>3</sup>	1,273,569		309,630	963,939			18,310
Jefferson	22	1,673,040		104,457	1,568,583			14,886
Lawrence	1	14,014			14,014			
Mahoning	2	4,837			4,837			
Meigs	2	2,888,136				2,888,136		69,096
Monroe	1	825,671		825,671				1,706
Morgan	1 <sup>4</sup>	46,549				46,529	20	
Muskingum	3 <sup>3</sup>	2,359,407			36,951	2,322,456		12,241
Noble	8	1,067,623			839,854	227,769		1,039
Perry	7	395,321			395,321			
Stark	6	239,470			239,470			
Tuscarawas	39	2,326,154	38,909	1,346	2,285,899			64,057
Vinton	9 <sup>3</sup>	2,921,215		285,015	1,780,113	856,087		23,121
Wayne	1	3,169			3,169			
TOTAL	192	27,668,811	3,607,898	2,953,269	14,766,647	6,340,977	20	335,963

<sup>1</sup>Tonnage of coal shipped from mines operating in more than one county was evenly split between the counties involved and type(s) of disposition reported unless a by-county breakdown was provided by the operator.

<sup>2</sup>Does not reflect tonnage stored. Reflects tonnage sold and shipped from mine.

<sup>3</sup>Does not include mines extending into this county from adjoining counties.

<sup>4</sup>This mine extends into Morgan County from Noble County and is not included in the total number of mines.

TABLE 7. — 1993 Rail shipments of Ohio coal, by county of origin and carrier

County	Number of mines	Shipments (short tons)			
		Total	Conrail	Ohio Central	Wheeling & Lake Erie
Belmont	1	3,517,030	3,517,030		
Harrison	1	51,959			51,959
Tuscarawas	1	38,909		38,909	
TOTAL	3	3,607,898	3,517,030	38,909	51,959



TABLE 8. — 1993 Washed Ohio coal

		Raw coal (short tons)	Washed coal (short tons)	Loss in washing (short tons)	Loss in washing (percent)	Percent of all washed coals
By type of mining	From surface mines	9,441,906 <sup>1</sup>	7,815,214 <sup>1</sup>	1,626,692	17.2	45.2
	From underground mines	15,422,077 <sup>1</sup>	9,459,507 <sup>1</sup>	5,962,570	38.7	54.8
	TOTAL	24,863,983	17,274,721 <sup>2</sup>	7,589,262	30.5	100.0
By seam	Lower Mercer (No. 3A)	96,895	85,268	11,627	12.0	0.5
	Brookville (No. 4)	263,167 <sup>1</sup>	231,470	31,697	12.0	1.3
	Winters	198,524	133,933	64,591	32.5	0.8
	Clarion (No. 4A)	6,297,030 <sup>1</sup>	3,371,879 <sup>1</sup>	2,925,151	46.5	19.5
	Lower Kittanning (No. 5)	920,514	753,492	167,022	18.1	4.4
	Middle Kittanning (No. 6)	927,394 <sup>1</sup>	764,067 <sup>1</sup>	163,327	17.6	4.4
	Lower Freeport (No. 6A)	972,157	791,372	180,785	18.6	4.6
	Upper Freeport (No. 7)	463,979 <sup>1</sup>	374,691 <sup>1</sup>	89,288	19.2	2.2
	Mahoning (No. 7A)	247,272	223,480	23,792	9.6	1.3
	Pittsburgh (No. 8)	7,450,768 <sup>1</sup>	5,037,920 <sup>1</sup>	2,412,848	32.4	29.2
	Meigs Creek (No. 9)	3,116,597	2,585,905	530,692	17.0	15.0
	Waynesburg (No. 11)	526,232 <sup>1</sup>	384,111	142,121	27.0	2.2
	Washington (No. 12)	25,817 <sup>1</sup>	22,948	2,869	11.1	0.1
	Other <sup>3</sup>	3,357,637	2,514,185 <sup>1</sup>	843,452	25.1	14.5
	TOTAL	24,863,983	17,274,721 <sup>2</sup>	7,589,262	30.5	100.0

<sup>1</sup>The raw tonnage (before washing) and/or the clean tonnage (after washing) of coal was estimated for those mines which failed to report this information. These estimates were calculated using a statewide-average loss-in-washing percentage based on raw/washed coal values for type of mining and for seam deemed to be reliable.

<sup>2</sup>These figures reflect total washed coal in 1993 and do not necessarily reflect only 1993 production. In 1993, 53.8% of the total production was reported as washed. Coal not designated as washed or unwashed was assumed to be unwashed.

<sup>3</sup>Unspecified tonnages of seams listed above.

TABLE 9. — 1993 Dollar value of coal at mine by county and mining method

County <sup>1</sup>	Surface				Underground				Total			
	No. of mines	Tonnage sold (short tons)	Value at mine <sup>2</sup> (dollars)	Per ton average (dollars)	No. of mines	Tonnage sold (short tons)	Value at mine <sup>2</sup> (dollars)	Per ton average (dollars)	No. of mines	Tonnage sold (short tons)	Value at mine <sup>2</sup> (dollars)	Per ton average (dollars)
Belmont	20 <sup>3</sup>	1,935,723	\$49,771,893	\$25.71	1	4,101,013	\$92,085,774	\$22.45	21 <sup>3</sup>	6,036,736	\$141,857,667	\$23.50
Carroll	7	109,423	2,694,770	24.63					7	109,423	2,694,770	24.63
Columbiana	11	643,261	15,342,787	23.85	3	490,772	6,782,485	13.82	14	1,134,033	22,125,272	19.51
Coshocton	14	1,356,896	37,886,954	27.92					14	1,356,896	37,886,954	27.92
Guernsey	8	404,027	11,148,088	27.59					8	404,027	11,148,088	27.59
Harrison	12	1,271,837	30,888,305	24.29	1	1,164,049	27,094,235	23.28	13	2,435,886	57,982,540	23.80
Holmes	5	153,635	2,643,186	17.20					5	153,635	2,643,186	17.20
Jackson	9 <sup>3</sup>	1,273,569	29,816,791	23.41					9 <sup>3</sup>	1,273,569	29,816,791	23.41
Jefferson	21	1,411,248	36,711,576	26.01	1	261,792	6,174,056	23.58	22	1,673,040	42,885,632	25.63
Lawrence	1	14,014	238,279	17.00					1	14,014	238,279	17.00
Mahoning	2	4,837	125,762	26.00					2	4,837	125,762	26.00
Meigs					2	2,888,136	125,812,670	43.56	2	2,888,136	125,812,670	43.56
Monroe					1	825,671	25,323,078	30.67	1	825,671	25,323,078	30.67
Morgan	1 <sup>4</sup>	46,549	2,199,906	47.26					1 <sup>4</sup>	46,549	2,199,906	47.26
Muskingum	3 <sup>3</sup>	2,359,407	101,236,966	42.91					3 <sup>3</sup>	2,359,407	101,236,966	42.91
Noble	8	1,067,623	24,036,692	22.51					8	1,067,623	24,036,692	22.51
Perry	7	395,321	7,222,981	18.27					7	395,321	7,222,981	18.27
Stark	6	239,470	4,021,067	16.79					6	239,470	4,021,067	16.79
Tuscarawas	39	2,326,154	48,664,039	20.92					39	2,326,154	48,664,039	20.92
Vinton	9 <sup>3</sup>	2,065,128	39,448,913	19.10	1 <sup>5</sup>	856,087	31,676,648	37.00	9 <sup>3</sup>	2,921,215	71,125,561	24.35
Wayne	1	3,169	82,394	26.00					1	3,169	82,394	26.00
TOTAL	183	17,081,291	\$444,181,349	\$26.00	9	10,587,520	\$314,948,946	\$29.75	192	27,668,811	\$759,130,295	\$27.44

<sup>1</sup>Sales reported from mines operating in more than one county were evenly split between the counties involved unless a by-county breakdown was provided by the operator.

<sup>2</sup>The FOB value of coal sold was estimated for those mines which failed to report this information. These estimates were calculated using a countywide-average price per ton by mining method based on reported FOB values deemed to be reliable.

<sup>3</sup>Does not include mines extending into this county from adjoining counties.

<sup>4</sup>This mine extends into Morgan County from Noble County and is not included in the total number of mines.

<sup>5</sup>This mine extends into Vinton County from Meigs County and is not included in the total number of mines.

TABLE 10. — 1993 Ohio coal-mine employment<sup>1</sup>, by occupational group and month

Occupational group	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
All production workers	2,391	2,395	2,377	2,386	2,411	2,407	2,563	2,532	2,162	2,276	2,413	2,361	2,404
Underground mines	872	853	838	842	891	880	1,058	1,049	659	763	851	870	904
Surface mines	1,519	1,542	1,539	1,544	1,520	1,527	1,505	1,483	1,503	1,513	1,562	1,491	1,500
Supervisory, technical, and clerical	816	840	840	836	827	826	829	810	811	800	795	786	787
Central preparation plant, central shop, etc.	560	590	577	588	580	566	568	610	510	516	569	523	522
Reclamation	140	103	92	100	122	150	150	147	156	157	187	165	147
Other <sup>2</sup>	210	286	279	277	190	191	194	189	169	176	190	187	188
TOTAL	4,117	4,214	4,165	4,187	4,130	4,140	4,304	4,288	3,808	3,938	4,154	4,022	4,048

<sup>1</sup>Employment was estimated for mines not reporting employment.<sup>2</sup>"Other" includes all employees who do not belong in any other employment category, such as mobile equipment operators, mechanics, or general outside workers.TABLE 11. — 1993 Ohio coal-mine production employment<sup>1</sup>, by county and month

County <sup>2</sup>	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
Belmont	355	361	314	300	349	350	346	369	364	372	372	379	389
Carroll	26	36	36	41	28	26	29	21	21	21	18	15	15
Columbiana	122	140	140	139	141	129	116	110	108	108	118	110	105
Coshocton	108	116	122	116	108	105	101	110	112	110	107	90	93
Guernsey	56	72	70	68	56	49	51	39	45	50	55	61	55
Harrison	231	196	211	224	232	230	231	239	239	241	245	250	234
Holmes	20	23	23	23	21	21	21	18	17	17	19	20	19
Jackson	74	65	69	68	69	68	70	71	75	70	87	87	89
Jefferson	204	233	225	222	189	193	193	210	211	216	187	187	185
Lawrence	8	6	7	8	9	11	12	0	0	0	15	15	15
Mahoning	4	0	0	0	1	6	6	6	5	6	5	7	7
Meigs	321	336	336	338	339	339	337	335	246	297	308	313	322
Monroe	66	9	9	9	57	57	244	205	0	0	68	68	69
Morgan	2	0	0	0	0	0	0	0	0	0	11	7	8
Muskingum	130	153	152	151	142	144	143	125	124	123	129	84	93
Noble	75	65	68	70	70	73	71	88	86	87	76	70	77
Perry	38	35	34	35	34	32	32	33	39	41	46	47	51
Stark	29	18	27	27	28	28	30	22	22	21	40	40	41
Tuscarawas	229	220	221	233	237	237	230	227	233	232	230	222	229
Vinton	292	310	312	313	310	308	299	303	214	263	276	288	307
Wayne	1	1	1	1	1	1	1	1	1	1	1	1	1
TOTAL	2,391	2,395	2,377	2,386	2,421	2,407	2,563	2,532	2,162	2,276	2,413	2,361	2,404

<sup>1</sup>Employment was estimated for mines not reporting employment.<sup>2</sup>For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.



TABLE 12. — 1993 Ohio coal-mine employment<sup>1</sup> in central preparation plants, central shops, etc., by county and month

County <sup>2</sup>	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
Belmont	64	65	53	65	62	61	62	63	65	66	68	69	69
Carroll	1	0	0	0	0	0	0	0	0	0	3	2	3
Columbiana	27	24	24	24	23	23	23	23	23	23	37	37	37
Coshocton	30	32	32	32	30	30	30	28	28	28	30	30	30
Guernsey	<sup>3</sup>	0	0	0	0	0	0	0	0	0	1	1	1
Harrison	20	20	20	20	20	20	19	21	21	21	19	19	19
Jackson	11	11	11	11	11	11	11	11	11	11	11	11	11
Jefferson	17	16	16	17	18	18	18	15	15	15	20	20	17
Lawrence	15	14	14	14	14	14	15	15	14	14	16	16	16
Mahoning	5	6	6	6	5	4	3	3	3	5	5	5	5
Meigs	58	65	65	65	65	65	64	64	41	41	53	53	53
Monroe	9	10	10	10	10	10	10	53	0	0	0	0	0
Morgan	2	0	0	0	0	0	0	0	0	0	12	8	8
Muskingum	139	162	162	162	154	152	152	135	135	133	133	94	93
Noble	13	3	3	3	11	11	11	27	27	27	15	11	11
Perry	4	5	5	5	4	0	1	4	4	4	6	6	6
Scioto	16	16	16	16	16	16	16	16	16	16	16	16	16
Tuscarawas	49	52	52	52	48	46	48	46	47	47	50	51	51
Vinton	80	89	88	86	89	85	85	86	60	65	77	75	76
TOTAL	560	590	577	588	580	566	568	610	510	516	569	523	522

<sup>1</sup>Employment was estimated for mines not reporting employment.<sup>2</sup>For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.<sup>3</sup>Averages fewer than one employee per month.TABLE 13. — 1993 Ohio coal-mine employment<sup>1</sup> in supervisory, technical, and clerical positions, by county and month

County <sup>2</sup>	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
Belmont	124	127	126	123	123	124	124	121	124	123	121	123	124
Carroll	11	15	16	17	9	9	9	8	8	8	9	9	10
Columbiana	26	26	26	26	26	26	24	28	28	28	28	26	25
Coshocton	34	40	39	36	36	34	35	35	35	33	27	30	29
Guernsey	9	12	12	11	9	8	8	9	9	8	9	9	9
Harrison	36	34	36	39	38	38	38	38	37	36	35	35	33
Holmes	5	5	5	5	5	5	5	5	5	5	5	5	5
Jackson	17	17	16	17	16	16	16	17	17	17	18	17	18
Jefferson	34	42	41	40	34	34	34	29	31	31	31	30	28
Lawrence	5	4	4	4	4	4	4	4	4	4	4	10	10
Mahoning	4	4	4	4	4	5	5	3	3	4	4	4	5
Meigs	145	144	145	145	145	146	148	149	147	144	143	144	145
Monroe	65	70	69	68	65	65	65	62	62	62	62	62	62
Morgan	2	0	0	0	0	0	0	0	0	0	8	6	6
Muskingum	95	105	105	105	110	110	111	90	88	87	87	73	73
Noble	16	8	8	8	15	15	15	25	25	24	17	15	15
Perry	10	10	10	10	11	8	8	8	10	10	10	10	10
Scioto	9	9	9	9	9	9	9	9	9	9	9	9	9
Stark	6	6	6	6	6	6	6	6	6	6	6	6	6
Tuscarawas	62	63	63	63	61	63	62	60	60	60	61	62	62
Vinton	100	98	99	99	100	100	102	103	102	100	100	100	102
Wayne	1	1	1	1	1	1	1	1	1	1	1	1	1
TOTAL	816	840	840	836	827	826	829	810	811	800	795	786	787

<sup>1</sup>Employment was estimated for mines not reporting employment.<sup>2</sup>For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.

TABLE 14. — 1993 Ohio surface coal-mine reclamation employment<sup>1</sup>, by county and month

County <sup>2</sup>	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
Belmont	21	4	0	5	7	10	10	8	9	11	64	64	63
Carroll	8	6	6	7	10	10	8	8	9	8	10	5	6
Columbiana	7	3	3	3	3	3	2	13	20	19	9	2	3
Coshocton	7	5	4	4	8	8	8	7	8	8	8	8	6
Guernsey	3	0	1	1	1	2	3	3	3	4	5	3	5
Harrison	3	2	1	1	3	4	9	5	4	3	2	2	2
Hocking	1	1	1	1	1	2	1	0	0	0	1	1	0
Holmes	1	0	0	0	0	0	0	4	4	4	0	0	0
Jackson	3	4	4	4	3	3	3	3	3	3	3	3	3
Jefferson	6	5	4	6	9	11	9	5	4	6	4	4	8
Lawrence	3	3	1	1	1	1	2	5	11	11	0	0	0
Mahoning	1	1	1	1	1	0	0	1	1	1	1	0	0
Morgan	1	0	0	0	0	0	0	0	0	0	5	4	3
Muskingum	57	59	56	56	58	70	70	62	58	57	57	50	35
Noble	6	2	2	2	4	5	5	12	12	12	7	6	4
Stark	2	2	2	2	2	2	2	0	0	0	2	3	2
Tuscarawas	10	6	6	6	11	19	18	11	10	10	8	9	6
Vinton	<sup>3</sup>	0	0	0	0	0	0	0	0	0	1	1	1
TOTAL	140	103	92	100	122	150	150	147	156	157	187	165	147

<sup>1</sup>Employment was estimated for mines not reporting employment.<sup>2</sup>For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.<sup>3</sup>Averages fewer than one employee per month.TABLE 15. — 1993 Ohio coal-mine employment<sup>1</sup> in other positions<sup>2</sup>, by county and month

County <sup>3</sup>	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
Belmont	61	60	55	56	58	58	59	67	64	66	63	64	64
Columbiana	13	13	13	13	13	13	13	14	14	14	13	13	13
Coshocton	4	4	4	4	4	4	4	4	4	4	5	5	5
Harrison	7	7	6	6	6	6	6	6	6	6	11	11	11
Jackson	11	11	12	10	11	10	11	12	12	12	10	11	10
Jefferson	9	6	6	6	14	14	14	8	8	8	8	8	8
Lawrence	4	0	0	0	2	3	4	0	0	0	11	11	11
Mahoning	1	0	0	0	0	0	0	2	2	2	0	0	0
Meigs	29	31	31	31	30	31	31	31	23	25	27	28	27
Monroe	26	99	98	97	5	5	5	0	0	0	0	0	0
Morgan	<sup>4</sup>	0	0	0	0	0	0	0	0	0	1	1	1
Muskingum	17	18	19	18	18	18	18	16	15	17	18	13	13
Noble	2	1	0	1	1	1	1	3	3	3	2	1	2
Scioto	3	3	3	3	3	3	3	3	3	3	3	3	3
Tuscarawas	4	11	11	11	4	4	4	1	1	1	1	1	1
Vinton	19	22	21	21	21	21	21	22	14	15	17	17	19
TOTAL	210	286	279	277	190	191	194	189	169	176	190	187	188

<sup>1</sup>Employment was estimated for mines not reporting employment.<sup>2</sup>"Other positions" includes all employees who do not belong in any other employment category, such as mobile equipment operators, mechanics, or general outside workers.<sup>3</sup>For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.<sup>4</sup>Averages fewer than one employee per month.



TABLE 16. — 1993 Wage and salary payments to Ohio coal-mine employees, by county and occupational group

County <sup>1</sup>	Wage and salary payments (nearest whole dollar) <sup>2</sup>						
	All occupations	Underground production employees	Surface production employees	Central preparation plant, central shop, etc.	Supervisory, technical, and clerical	Reclamation	Other
Belmont	\$27,520,749	\$9,622,789	\$4,941,141	\$1,969,338	\$7,074,345	\$936,392	\$2,976,744
Carroll	1,180,414		776,763	13,816	238,401	151,434	
Columbiana	6,749,396	2,687,812	1,555,479	921,341	1,007,523	205,012	372,229
Coshocton	6,764,452		4,283,549	868,648	1,324,374	154,292	133,589
Guernsey	2,246,774		1,886,587	3,676	284,769	71,742	
Harrison	7,060,566		4,103,961	817,557	1,673,339	73,568	392,141
Hocking	11,151					11,151	
Holmes	849,674		556,895		256,885	35,894	
Jackson	3,730,796		2,409,927	404,113	568,684	14,168	333,904
Jefferson	9,331,791	1,181,803	6,344,205	452,052	1,089,880	162,036	101,815
Lawrence	825,167		131,531	417,195	123,167	72,344	80,930
Mahoning	335,284		85,876	150,656	72,647	5,105	21,000
Meigs	26,677,597	14,586,976		2,338,551	8,578,700		1,173,370
Monroe	8,076,724	3,375,312		441,853	4,069,341		190,218
Morgan	423,542		92,450	105,291	166,734	46,226	12,841
Muskingum	17,626,947		4,413,183	4,829,937	5,862,784	1,948,378	572,665
Noble	4,987,904		3,365,716	466,683	892,298	206,994	56,213
Perry	1,469,616		1,166,463	12,813	290,340		
Scioto	868,384			399,384	361,000		108,000
Stark	986,302		719,893		260,610	5,799	
Tuscarawas	9,637,722		6,275,981	1,401,426	1,607,543	250,100	102,672
Vinton	20,940,815	4,517,061	6,325,079	3,197,064	6,068,913	5,974	826,724
Wayne	50,566		32,566		18,000		
TOTAL	\$158,352,333	\$35,971,753	\$49,467,245	\$19,211,394	\$41,890,277	\$4,356,609	\$7,455,055

<sup>1</sup>For those operations reporting activity in more than one county, wage and salary payments were evenly split between the counties involved unless a by-county breakdown was provided by the operator.

<sup>2</sup>For those operations reporting only a total wage and salary payment to all workers, an equal pay rate was assumed for all employees. In cases where quarterly employment was reported but wage and salary payments were not, wage and salary payments for that quarter were estimated from reported payments in the other quarters to arrive at the annual figure. For mines reporting employment and no wage and salary payments, wage and salary payments were estimated using a county-wide or state-wide average.



A group of coal miners pausing for a daily safety talk at the Hanna Coal Company Glen Castle No. 6 mine, located in Harrisville, Short Creek Township, Harrison County. Circa 1955. Photo courtesy of Dale Davis.

## INDUSTRIAL MINERALS

Industrial minerals, other than mineral fuels, were produced in a total of 87 Ohio counties in 1993. The combined value of all nonfuel industrial minerals sold in 1993 was \$511,650,285.

In 1993, 443 companies operated 672 industrial-mineral mining operations. Industrial minerals were produced or sold from 536 of these operations. Thirty-six of the 443 companies produced more than one mineral commodity from 43 operations. Three of these companies produced coal and one industrial-mineral commodity from 4 operations. Thirty-three companies produced multiple industrial-mineral commodities from 39 operations. The remaining companies produced one industrial-mineral commodity.

Of the 39 multiple industrial-mineral operations, 12 operations produced clay and shale; 7 operations produced sand and gravel and clay; 4 operations produced sandstone and sand and gravel; 3 operations produced limestone and clay; 2 operations produced limestone, clay, and shale; 2 operations produced sand and gravel, clay, and peat; 2 operations produced limestone and shale; 1 operation pro-

duced limestone, sandstone, clay, and shale; 1 operation produced limestone, sand and gravel, and clay; 1 operation produced limestone, sandstone, and clay; 1 operation produced sand and gravel, sandstone, and clay; 1 operation produced sandstone and shale; 1 operation produced sand and gravel and limestone; and 1 operation produced sand and gravel and shale.

The 166 multiple industrial-mineral commodity production employees worked an average of 201 days in 1993. Total wages of \$3,457,456 were paid to a total of 201 employees (166 production employees and 35 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$17,201.

The total average annual employment reported in 1993 for industrial mineral operations was 4,478 people (3,167 production employees and 1,311 nonproduction employees). Total wages for all employees at industrial mineral operations in 1993 were \$129,597,002. The average annual wage, based on those employees for whom wages were reported, was \$28,941.

TABLE 17. — 1993 Value of Ohio industrial minerals

Commodity	Sales (tons)	Change from 1992 (tons/percent)	Value <sup>1</sup> (dollars)	Percent of total value
Limestone and dolomite	60,705,114	+ 7,563,642/ + 14.2	\$242,836,089	47.5
Sand and gravel	47,769,475	+ 3,023,771/ + 6.8	173,626,143	33.9
Salt	3,562,352	+ 629,858/ + 21.5	48,066,967	9.4
Sandstone and conglomerate	1,933,259	+ 78,246/ + 4.2	34,057,410	6.7
Clay	1,711,083	- 798,065/ - 31.8	6,797,062	1.3
Shale	1,301,416	- 776,301/ - 37.4	3,878,089	0.8
Gypsum	233,172	+ 28,147/ + 13.7	2,215,135	0.4
Peat	17,833	+ 350/ + 2.0	173,390	<0.1
TOTAL	117,233,704	+ 9,749,648/ + 9.1	\$511,650,285	100.0

<sup>1</sup>The FOB value of industrial minerals sold was estimated for those mines which failed to report this information and for those producing material for captive use. These estimates were calculated using a countywide- or statewide-average price per ton based on reported FOB values.





Piqua Stone Products quarry in Miami County. *Circa 1953.*



Waterloo Coal Company limestone quarry in Jackson County. Photo taken during the 1993 Ohio's Mineral Industries Teachers Workshop.

TABLE 18. — 1993 Employment at Ohio industrial mineral operations, by county and commodity

County <sup>1</sup>	Number of employees <sup>2</sup>													
	Total		Limestone and dolomite		Sand and gravel		Sandstone and conglomerate		Clay		Shale		Salt	
	Pro-duction	Non-pro-duction	Pro-duction	Non-pro-duction	Pro-duction	Non-pro-duction	Pro-duction	Non-pro-duction	Pro-duction	Non-pro-duction	Pro-duction	Non-pro-duction	Pro-duction	Non-pro-duction
Adams	24	29	24	29	3	0					1	0		
Allen	30	3	27	3	3	25								
Ashland	26	4			4	17								
Ashtabula	18	4	4	1	8	15			1	1				
Athens	17	18			7	6			0	0				
Auglaize	21	11	13	5	3	6								
Belmont	23	11	8	2										
Brown <sup>3</sup>	0	0							6	0				
Butler	69	75			63	75			1	0				
Carroll	7	2			6	2								
Champaign	25	7			22	6								
Clark	44	20	1	2	43	18								
Clermont	7	5			7	5								
Clinton	19	15	19	15	7	1			8	0	5	0		
Columbiana	28	3												
Coshocton	46	32	8	3	21	24	15	5						
Crawford	44	0	43	0	1	0								
Cuyahoga	55	171									3	1	50	167
Darke	9	6	6	3	3	3								
Defiance	2	1			2	1								
Delaware	48	10	48	10										
Erie	121	34	115	33	5 <sup>5</sup>	1	1	0						
Fairfield	9	5			8	5								
Fayette	7	2	7	2										
Franklin	167	61	52	13	105	47								
Fulton	2	1			2	1								
Gallia	6	4			6	4								
Geauga	46	71			26	3	16	66						
Greene	49	21	11	6	38	15								
Guernsey	5	2	5	2										
Hamilton	56	58			56	58								
Hancock	32	0	32	0										
Hardin	3	9	3	9							2	1		
Harrison	2	1			5	1								
Henry	5	1												
Highland	22	23	22	23										
Hocking	16	3			12	2					1	1		
Holmes	18	7			11	6			1	1				
Huron	6	2			5	2	1	0	3	6				
Jackson	12	7	4	0										
Jefferson	3	1			1	0								
Knox	57	29			26	27	2	1	1	0	1	0	98	0
Lake	107	2			6 <sup>5</sup>	1	2	1						
Lawrence	18	4			6	1								
Licking	27	8			22	5					4	2	1	1



## INDUSTRIAL MINERALS

[illegible]

For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.

<sup>22</sup>Employment is not included for mines which were owner operated.

<sup>3</sup>This county reported no production or sales of industrial minerals in 1993.

<sup>56</sup>Employment for Lake Erie sand and gravel.

## LIMESTONE AND DOLOMITE

Limestone and dolomite were sold or produced by 78 companies at 121 operations in 48 Ohio counties during 1993. Sales of limestone and dolomite totalled 60,705,114 tons (+14.2 percent from 1992); Erie, Wyandot, Franklin, Sandusky, and Ottawa Counties accounted for 38.3 percent of those sales. Reported known production totalled 61,784,547 tons.

Lime produced from Ohio limestone and dolomite totalled 1,536,334 tons in 1993 and came from five operations in Ottawa, Sandusky, and Wyandot Counties. Ohio ranks first nationally in the production of lime. The top five states, in descending order of lime production, are Ohio, Alabama, Pennsylvania, Kentucky, and Texas. Ohio ranks seventh in the production of crushed stone, which includes

crushed sandstone. The top five states, in descending order of crushed stone production, are Texas, Illinois, Pennsylvania, Florida, and Kentucky.<sup>4</sup>

The total value<sup>5</sup> of limestone and dolomite sold in 1993 was \$242,836,089. Average price per ton was \$4.00.

An annual average of 1,289 employees worked an average of 203 days to produce limestone and dolomite. Total wages of \$52,262,964 were paid to a total of 1,670 employees (1,289 production employees and 381 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$31,295. An additional 88 people (72 production employees and 16 nonproduction employees) were employed by operations mining limestone and dolomite along with one or more other mineral commodities.

Primary uses for crushed and broken limestone and dolomite were road construction/resurfacing and commercial building. Other major uses for various forms of limestone and dolomite included stone for asphaltic concrete, portland cement concrete, production of lime, and riprap.

<sup>4</sup>Preliminary information from U.S. Bureau of Mines.

<sup>5</sup>Includes reported and estimated values. See footnote 1, p. 4.

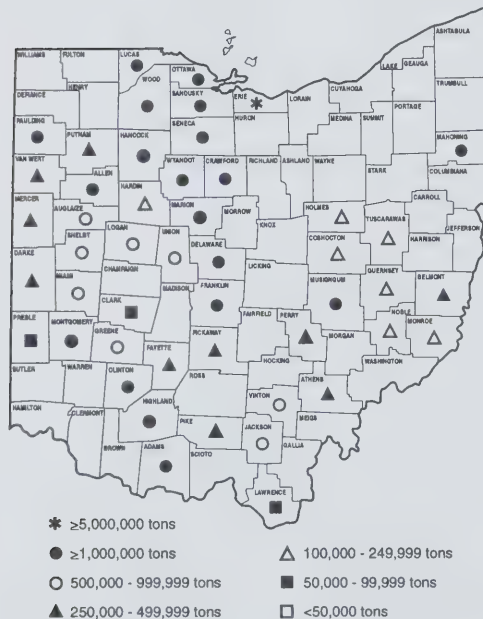


FIGURE 6.—Sales of limestone and dolomite in Ohio in 1993, by county.

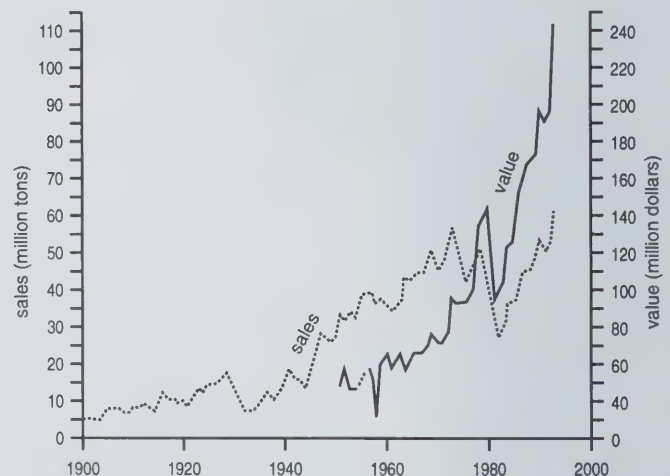


FIGURE 7.—Sales and value of limestone and dolomite in Ohio. Value line dashed where data not available.

TABLE 19.—1993 Production of lime from Ohio stone, by county and type

County	Total tons <sup>1</sup>	Building (tons)	Chemical and industrial (tons)	Refractory (tons)	Other (tons)
Ottawa	95,266	48,757	46,509		
Sandusky	1,320,496		952,378		368,118
Wyandot	120,572		120,572		
TOTAL	1,536,334	48,757	1,119,459	0	368,118

<sup>1</sup>Burning produced a 45.9 percent weight loss.



TABLE 20. — 1993 Ohio limestone and dolomite sales, by county and type

County	Tons sold													
	Total all types	Crushed and broken stone								Dimension stone	Stone for portland cement manufacture	Agricultural stone (aglime)	Raw stone for burning	Unspecified/other
		Total	Riprap	Flux stone	Stone for portland cement concrete	Stone for asphaltic concrete	Road construction/resurfacing	Commercial building	Railroad ballast					
Adams	2,066,565	2,066,565	7,475		82,569	151,673	205,395	74,686						
Allen	1,436,068	1,127,358	3,604			20,830	10,000	1,031,558	44,231			2,760		305,950
Athens	262,552	262,694												59,858
Auglaize	668,678	662,509	15,132			37,105	165,857	444,415				6,169		
Belmont	359,318	359,318	259,871				77,082	22,365						
Clark	66,753	66,753												
Clinton	1,101,571	888,514	43,037											
Coshocton	105,812	105,812												
Crawford	1,389,470	1,342,262	11,817	123,464										
Darke	406,562	406,562												
Delaware	3,466,869	3,115,579	13,345											
Erie	5,781,429	5,486,408	83,357											
Fayette	365,401	328,977												
Franklin	4,661,969	4,661,969	3,189											
Greene	876,225	603,896												
Guernsey	113,766	113,766												
Hancock	1,267,383	1,259,119	6,941											
Hardin	180,211	164,807	359											
Highland	1,131,269	1,096,286	2,539											
Holmes	109,658	109,658												
Jackson	745,783	725,432												
Lawrence	88,211	53,915	2,582											
Logan	793,321	792,557	30,846											
Lucas	3,091,060	2,986,565	119,739											
Mahoning	2,326,925	2,241,366												
Marion	1,037,054	1,020,122	12,115											
Mercer	495,368	433,446	61,920											
Miami	901,908	847,003	7,374											
Montgomery	102,996	102,996												
Muskingum	1,093,878	800,087												
Noble	2,215,598	1,404,466	70,908											
Ottawa	106,200	104,242												
Paulding	3,821,510	3,502,498	95,147											
Perry	1,610,141	876,468	69,729											
Pickaway	281,899	234,977												
Pike	276,955	276,955	5,467											
Preble	316,755	293,363	12,629											
Putnam	64,682	60,083	9,477											
Sandusky	316,422	316,422	1,673											
Seneca	4,272,931	1,632,752	1,396,910											
Shelby	1,976,553	1,591,173	24,753											
Tuscarawas	604,526	604,526	80,303											
Union	234,768	234,768	8,108											
Van Wert	915,751	155,608	9,380											
Vinton	480,305	480,305	49,356											
Wood	519,720	296,859												
Wyandot	1,473,208	1,145,914	176,021											
TOTAL	4,723,157	4,293,230	77,973	512,037	2,908,356	2,911,585	22,597,076	10,521,541	147,760	9,868	2,018,459	117,319	224,098	209,975
	60,705,114	51,676,910	2,773,076	792,500	2,908,356	2,911,585	22,597,076	10,521,541	1,588,027	9,868	2,018,459	1,482,183	2,837,387	2,680,307

## SAND AND GRAVEL

Sand and gravel were sold or produced by 253 companies at 329 operations in 66 Ohio counties plus Lake Erie during 1993. Sales<sup>6</sup> of sand and gravel totalled 47,769,475 tons (+6.8 percent from 1992). Sand accounted for 23,366,054 tons of the total sand and gravel sold, and gravel accounted for 24,403,421 tons. Hamilton, Franklin, Butler, Portage, and Stark Counties led in sales, accounting for 43.8 percent of the total. Reported known production<sup>6</sup> of sand and gravel totalled 47,972,399 tons in 1993. Ohio ranks second nationally in the production of construction sand and gravel. The top five states, in descending order of production, are

<sup>6</sup>Please note—Sales and production figures for sand include material dredged from Lake Erie.

<sup>7</sup>Preliminary information from U.S. Bureau of Mines.

<sup>8</sup>Includes reported and estimated values. See footnote 1, p. 4.

California, Ohio, Michigan, Texas, and Washington.<sup>7</sup>

A total of 149,260 tons of sand were dredged from Lake Erie in 1993. The Maumee Bay and Maumee River areas are no longer producing sand or gravel.

The total value<sup>8</sup> of sand and gravel sold in 1993 was \$173,626,143. Average price per ton was \$3.63.

An annual average of 1,243 employees worked an average of 163 days in 1993 to produce sand and gravel. Total wages of \$48,243,210 were paid to a total of 1,844 employees (1,243 production employees and 601 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$26,162. An additional 50 people (39 production employees and 11 nonproduction employees) were employed by operations mining sand and gravel along with one or more other mineral commodities.

Road construction/resurfacing, building, asphaltic concrete, and portland cement concrete were the major uses for Ohio sand and gravel in 1993.

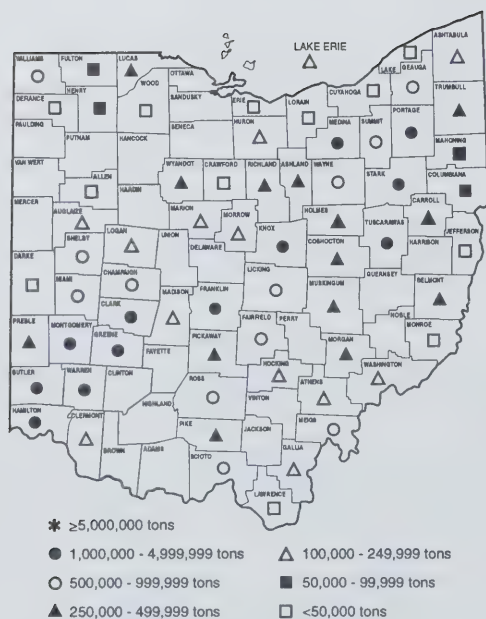


FIGURE 8.—Sales of sand and gravel in Ohio in 1993, by county.



FIGURE 9.—Sales and value of sand and gravel in Ohio. Value line dashed where data not available. Figures from 1984 to 1993 include Lake Erie dredged material.





A blast at the sandstone quarry of Walter Best, Inc., in Geauga County. *Circa 1960.*



Drag line mining glacial outwash for sand and gravel at the Olen Corporation Columbus Plant. Photo taken during the 1993 Ohio's Mineral Industries Teachers Workshop.

TABLE 21. — 1993 Ohio sand and gravel sales, by county and type

County	Tons sold														Foundry sand	Other/ unclassified	
	Total sand and gravel	Total sand	Total gravel	Building		Portland cement concrete		Asphaltic concrete		Road construction/ resurfacing		Filtration					
				Sand	Gravel	Sand	Gravel	Sand	Gravel	Sand	Gravel	Sand	Gravel	Sand		Gravel	
Allen	49,141	32,969	16,172	32,490	3,373			6,226		101,277	115,614	26,743	12,799		26,639	32,262	
Ashland	404,846	170,230	234,616	8,734	84,302			9,824		14,020		2,601	2,438		85,163	75,617	
Ashtabula	225,777	110,518	115,259	2,323	31,184			29,803		2,324		2,311	8,458	2,493	30,844	23,636	
Athens	117,128	67,787	49,341	2,323	2,311								554		39,911	19,476	
Auglaize	229,083	139,160	89,923	93,267		5,982	70,447										
Belmont	267,346	158,702	108,644		6,868	62,290	41,624	79,172	49,117	1,448,368	1,307				17,240	9,728	
Butler	4,402,180	1,887,254	2,514,926	112,454	296,928	82,955	88,370	82,954		28,889	1,960,072				160,523	169,556	
Carroll	280,728	146,941	133,787			4,883			13,566	109,520	39,799				113,169	80,422	
Champaign	572,812	150,184	422,628	6,240	59,072					266,300	157,600	250			34,424	205,706	
Clark	1,806,090	690,399	1,115,691	24,331	35,188	105,191	152,541	288,077	220,136		432,113				6,500	275,713	
Clermont	150,093	90,269	59,824												90,269	59,824	
Columbiana	83,444	42,887	40,557							17,125	5,180				39,158	35,377	
Coshocton	275,486	153,465	122,021	12,595	3,726	48,698	19,721	46,414	54,684		36,269	17	373		28,616	7,248	
Crawford	768	384	384												384	384	
Cuyahoga	4,000	4,000		4,000													
Darke	38,320	18,491	19,829												18,491	19,829	
Defiance	24,571	24,571															
Erie	9,080	9,080												372	8,595	2,637	
Fairfield	661,948	453,692	208,256	32,073	120,118	249,153		166,540	85,501	523,357	797,088	113			87,500	87,500	
Franklin	4,511,415	1,817,532	2,693,883	274,298	1,263,723	553,321	221,551	379,056	324,021								
Fulton	96,915	96,915		91,812											5,103	80,246	
Gallia	201,109	120,863	80,246	1,431						15,638	5,665				119,432	65,210	
Geauga	544,133	349,370	194,763	129,594	53,869	87,404		39,091		462,625	865,938	2,561	70,019		75,082	65,210	
Greene	2,481,769	1,009,878	1,471,891	78,839	127,754	100,596		90,300	20,500	1,155,862	1,702,445	4,450	1,443	2,593	277,518	335,114	
Hamilton	4,895,431	2,131,823	2,763,608	317,581	671,780	110,969	93,915	100,611	8,677						439,757	285,348	
Henry	80,225	76,975	3,250					76,975	3,250								
Hocking	156,443	78,853	77,590	1,353						90					77,500	77,500	
Holmes	377,141	188,331	188,810	2,661	13,124	47,970	93,935	112,649	50,207	9,886	50,207		20,497		15,165	11,047	
Huron	235,058	193,592	41,466	2,065	18,457	148,081		30,014	6,750			6,518			6,914	16,259	
Jefferson	805	402	403	209	210										193	193	
Knox	1,061,505	448,344	613,161	11,774	97,087	181,247	67,332	98,513	149,179	19,060	56,098				137,750	243,465	
Lake	19,800	9,900	9,900												9,900	9,900	
Lawrence	47,618	39,008	8,610	1,691											35,059	8,610	
Licking	749,242	292,440	456,802	80,057	223,041	16,870		72,040	44,540	78,246	90,385	2,103		2,258	45,227	98,836	
Logan	237,934	165,073	72,861	17,593		66,180				1,756					77,441	72,861	
Lorain	4,925	4,925		4,925													
Lucas	254,167	252,676	1,491	153,447	1,491					19,905					79,324	19,923	
Madison	126,110	59,247	66,863		46,940			58,893		22,964	5,170	8,751	10,110		354		
Mahoning	65,857	40,466	25,391	8,751	10,111										27,146	42,666	
Marion	101,027	58,361	42,666	31,215											36,035		
Medina	1,003,842	645,832	358,010	197,355	200,451			208,530	8,378	203,912	149,181						
Meigs	736,398	358,119	378,279	24,574	141,331			256,698	121,590	76,847	115,358				92,516	190,550	
Miami	766,655	275,169	491,486	23,674	72,162					158,979	228,774				7,337	7,336	
Monroe	14,673	7,337	7,336														
Montgomery	1,837,348	594,426	1,242,922	30,520	62,267	156,122	212,477	81,638	96,261	180,093	272,868		12,536		146,053	586,513	



Morgan	295,992	207,195	88,797	41,438	17,758	41,440	17,759	41,438	17,759	41,440	17,761	41,439	17,760			
Morrow	125,025	28,366	96,659	22,479	34,296	88,213	5,793	24,508	52,833	638	45,364	5,887	8,535			8,464
Muskingum	495,119	214,763	210,356	5,541	5,872	88,213	5,793	24,508	52,833	638	51,408	1,413	8,535			94,450
Pickaway	286,885	122,287	166,598	525	525	525	525	525	525	525	147,314					18,759
Pike	276,464	204,076	72,388	7,002	4,742	110,020	2,915	32,172	11,042	13,607	11,613					42,076
Portage	4,296,088	2,852,774	1,443,314	576,437	503,519	744,587	79,157	466,384	133,449	306,934	234,098		10,582			482,509
Preble	315,608	91,704	223,904	38,129	67,061	16,542	44,354	8,271	22,175	24,814	88,705	2,344	359			1,250
Richland	394,985	71,894	323,091	44,393	277,768	22,216	20,215	22,216	9,323	15,519	15,519		4,173			16,308
Ross	676,468	350,084	326,384	165,890	55,645	20,215	6,428	20,215	2,725	12,576	61,241					151,403
Scioto	868,624	555,982	312,642	37,253	23,734	11,827	6,428	233,255	11,913	8,839	5,759					264,808
Shelby	896,298	427,936	468,362			142,729	163,885	39,500	40,905	77,340	240,530					245,707
Stark	2,800,749	1,261,370	1,539,379	50,288	94,181	247,183	88,766	261,415	355,474	5,000	7,581		5,401			625,144
Summit	585,911	373,569	212,342	160,004	89,623	111,007	25,207	147,403	128,859	11,055	4,107					97,558
Trumbull	407,031	386,498	20,533	99,497	16,426	84,757		121,757		270,073	307,432	3,408	51,063			43,786
Tuscarawas	1,809,070	881,005	928,065	303,084	288,498	108,384	72,811			170,501	218,373					74,299
Warren	1,391,933	560,495	831,438	45,682	145,519			9,920		98,783	7,449					344,312
Washington	130,741	80,186	50,555	26,923	27,567	45,614	21,826	30,000	32,000		37,369	24,678				18,665
Wayne	578,613	309,800	268,813	15,841	129,626	85,527		85,527				5,000				15,539
Williams	510,808	383,695	127,113									85,529				114,562
Wood	8,783	8,783														127,112
Wyandot	326,634	202,063	124,571	121,268	23,845	72,461	85,756			4,975	5,095	825	9,875	2,534		8,783
Lake Erie	149,260	149,260		39,663		6,842		66,497		36,258						
TOTAL	47,769,475	23,366,054	24,403,421	3,615,263	5,453,073	3,943,891	1,799,155	3,929,379	2,038,386	6,102,157	8,627,571	224,380	247,225	10,250	5,540,734	6,238,011

TABLE 22. — 1993 Ohio Lake Erie  
sand and gravel production

Area	Production <sup>1</sup>	
	Cubic yards	Short tons
Lake Erie		
Fairport	81,183	109,597
Vermilion-Lorain Inner	29,380	39,663
Vermilion-Lorain Outer	0	0
TOTAL	110,563	149,260

<sup>1</sup>Production reported in cubic yards; converted to tons in the ratio of 1 cubic yard equals 1.35 short tons.

## SANDSTONE AND CONGLOMERATE

Sandstone and conglomerate were sold or produced by 23 companies at 33 operations in 19 Ohio counties during 1993. Sales totalled 1,933,259 tons (+4.2 percent from 1992); Geauga, Perry, Ross, Knox, and Lake Counties accounted for 91.4 percent of that total. Crushed sandstone and conglomerate accounted for 1,894,761 tons of the total sales, and dimension stone accounted for 38,498 tons. Reported known production of sandstone and conglomerate was 2,053,855 tons in 1993. Ohio ranks seventh nationally in production of all dimension stone but ranks first in the production of sandstone dimension stone. The top four states, in descending order of total dimension-stone production, are Indiana, Georgia, Vermont, and Texas.<sup>9</sup> Na-

<sup>9</sup>Preliminary information from U.S. Bureau of Mines.

<sup>10</sup>Includes reported and estimated values. See footnote 1, p. 4.

tional standings for crushed stone are included with Limestone and Dolomite.

The total value<sup>10</sup> of sandstone and conglomerate sold in 1993 was \$34,057,410. Average price per ton was \$17.24 for crushed stone and \$36.22 for dimension stone.

An annual average of 161 employees worked an average of 142 days in 1993 to produce sandstone and conglomerate. Total wages of \$7,829,750 were paid to a total of 248 employees (161 production employees and 87 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$31,572. An additional 46 people (32 production employees and 14 nonproduction employees) were employed by operations mining sandstone and conglomerate along with one or more other mineral commodities.

Crushed stone was used primarily for glass sand, foundry sand, silica flour, and construction. Dimension stone was used primarily for rough construction purposes.

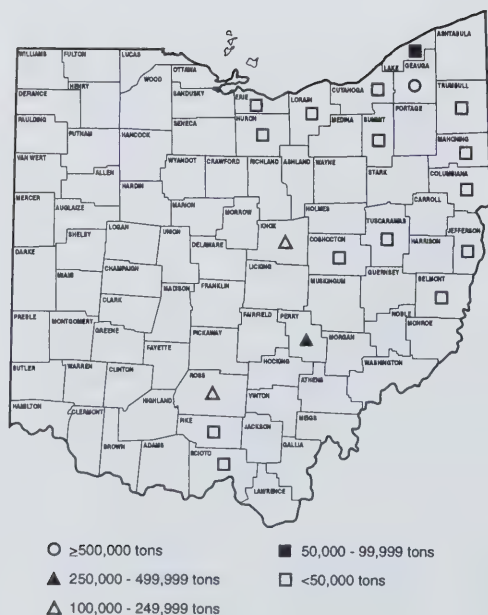


FIGURE 10.—Sales of sandstone and conglomerate in Ohio in 1993, by county.

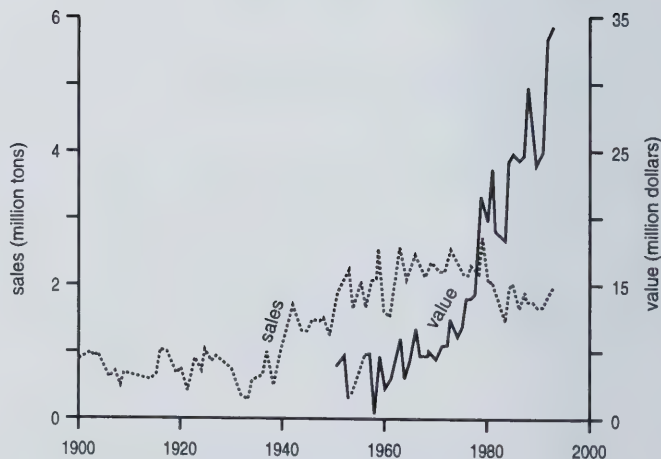


FIGURE 11.—Sales and value of sandstone and conglomerate. Value line dashed where data not available.



TABLE 23. — 1993 Ohio sales of crushed sandstone and conglomerate, by county and type

County	Tons sold													
	Total	Foundry sand	Glass sand	Metallurgical pebble	Refractory	Riprap	Aggregate	Silica flour	Polishing/grinding sand	Fire and furnace sand	Engine sand	Frac sand	Construction	Other/unspecified
Belmont	7,524					7,524								
Columbiana	3,235					2,289							946	
Cuyahoga	2,600					1,000							100	1,500
Geauga	992,034					5,308								
Huron	26,171	92,669	144,133	74,012	11,500	26,171	31,744		35,895	15,941	10,489	11,521	68,167	490,683
Jefferson	853					853								
Knox	151,731	27,180	73,177					41,605			4,070	4,046		1,653
Lake	60,800						46,334						14,466	
Mahoning	8,970													8,970
Perry	386,989	11,915	254,233					89,794						31,047
Pike	37,377	7,682	1,522	15,337									12,836	
Ross	174,071	49,987	61,793		3,087						19,921			39,283
Summit	3,165						3,165							
Trumbull	794						794							
Tuscarawas	38,447				12,270	5,757	192			16,348			3,680	200
TOTAL	1,894,761	189,433	534,858	89,349	26,857	48,902	82,229	131,399	35,895	32,289	34,480	15,567	100,167	573,336

TABLE 24. — 1993 Ohio sales of dimension sandstone and conglomerate, by county and type

County	Tons sold									
	Total	Refractory	Rough construction	Rubble	Grindstones	Rough architectural	Finished	Curbing	Flagging	Other/unspecified
Coshocton	20,093		20,093							
Erie	238									238
Knox	1,011		1,011							
Lorain	3,675					970				2,705
Scioto	13,481		13,481							
TOTAL	38,498	0	34,585	0	0	970	0	0	0	2,943

## CLAY

Clay was sold or produced by 44 companies at 55 operations in 30 Ohio counties during 1993. Clay sales (including material for captive use) totalled 1,711,083 tons (-31.8 percent from 1992); Stark, Tuscarawas, Paulding, Montgomery, and Butler Counties accounted for 71.0 percent of the total sales. Ohio ranks fifth nationally in the production of clay and shale. The top five states, in descending order of production, are Georgia, California, Wyoming, Alabama, and Ohio.<sup>11</sup> Reported known production of clay was 1,768,356

<sup>11</sup>Preliminary information from U.S. Bureau of Mines.

<sup>12</sup>Includes reported and estimated values. See footnote 1, p. 4.

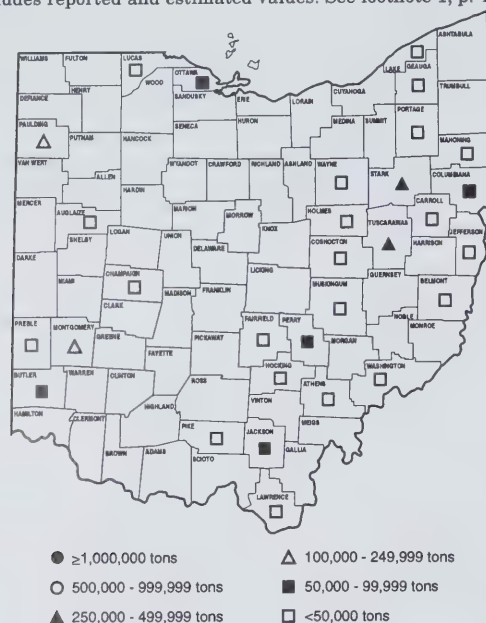


FIGURE 12.—Clay sales in Ohio in 1993, by county.

tons. The total value<sup>12</sup> of clay sold (including material for captive use) in 1993 was \$6,797,062. Average price per ton was \$3.97.

An annual average of 73 employees worked an average of 90 days in 1993 mining clay. Total wages of \$2,123,985 were paid to a total of 89 employees (73 production employees and 16 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$23,865. An additional 151 people (130 production employees and 21 nonproduction employees) were employed by operations mining clay along with one or more other mineral commodities.

Clay mined in Ohio in 1993 was largely for captive use in the landfill industry, for production of common clay products, for cement manufacture, and for construction.

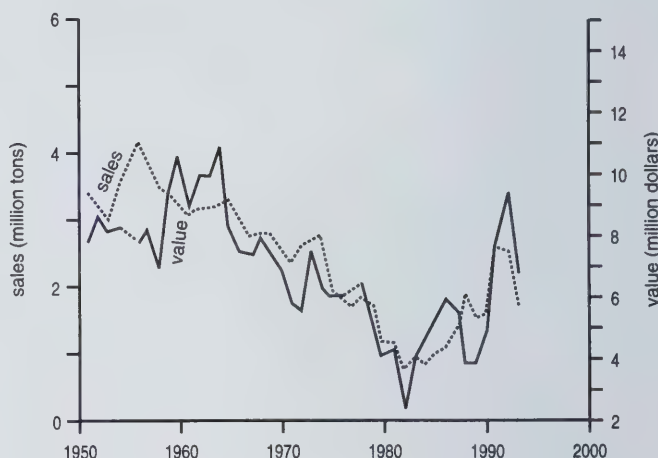


FIGURE 13.—Sales and value of clay in Ohio. Value line dashed where data not available.

TABLE 25.—1993 Ohio clay sales, by county and type

County	Tons sold								
	Total	Common clay products	Glazed ware	Vitrified products	Cement manufacture	Refractories	Construction	Landfill use	Other/unspecified
Athens	945								945
Auglaize	5,830	5,830							
Belmont	7,072						7,072		
Butler	88,711	88,711							
Carroll	6,817					6,817			
Champaign	58	48					10		
Columbiana	75,340	28,086	23,554			23,700			
Coshocton	10,238	10,238							
Fairfield	165								165
Geauga	334								334
Hocking	30,337			30,337					
Holmes	21,960	21,960							
Jackson	56,327	53,817							2,510
Jefferson	43,823	43,823							
Lake	2,900							2,900	
Lawrence	27,885	8,944				803			18,138
Lucas	178	178							
Mahoning	7,605						7,605		
Montgomery	143,514	143,514							
Muskingum	21,446	21,446							
Ottawa	62,000						62,000		
Paulding	177,656				177,656				
Perry	63,243	60,003							3,240
Pike	21,000						21,000		
Portage	932						198		734
Preble	762								762
Stark	461,300	37,980					80,000	343,320	
Tuscarawas	343,176	211,310		32,077		49,286			50,503
Washington	5,529						5,529		
Wayne	24,000	24,000							
TOTAL	1,711,083	759,888	23,554	62,414	177,656	80,606	183,414	346,220	77,331



## SHALE

Shale was sold or produced by 25 companies at 37 operations in 21 Ohio counties during 1993. Shale sales (including material for captive use) totalled 1,301,416 tons (-37.4 percent from 1992); Tuscarawas, Cuyahoga, Marion, Mahoning, and Stark Counties accounted for 73.0 percent of the total sales. Reported known production of shale was 1,302,935 tons. National standings for shale production are included with Clay. The total value<sup>13</sup> of shale sold (includ-

ing material for captive use) in 1993 was \$3,878,089. Average price per ton was \$2.98.

An annual average of 59 employees worked an average of 143 days in 1993 mining shale. Total wages of \$1,288,651 were paid to a total of 75 employees (59 production employees and 16 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$17,182. An additional 81 people (72 production employees and 9 nonproduction employees) were employed by operations mining shale along with one or more other mineral commodities.

Shale mined in Ohio in 1993 was largely for captive use in the production of common clay products, for lightweight aggregate, for cement manufacture, and for construction.

<sup>13</sup>Includes reported and estimated values. See footnote 1, p. 4.

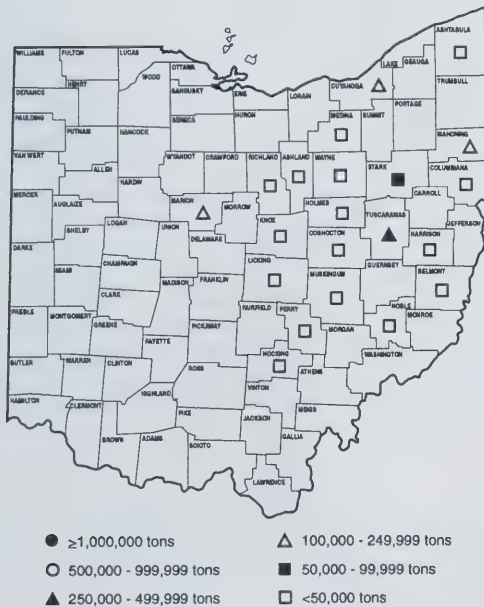


FIGURE 14.—Shale sales in Ohio in 1993, by county.

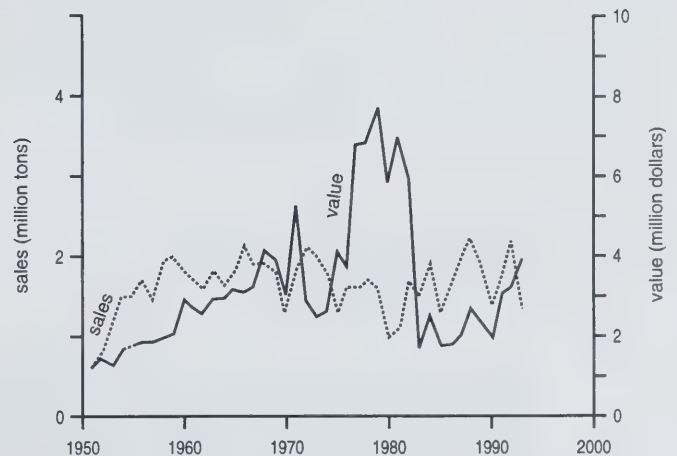


FIGURE 15.—Sales and value of shale in Ohio. Value line dashed where data not available.

TABLE 26. — 1993 Ohio shale sales, by county and type

County	Tons sold							
	Total	Common clay products	Vitrified products	Cement manufacture	Lightweight aggregate	Construction	Landfill use	Other/unspecified
Ashland	1,252	1,252						
Ashtabula	350					350		
Belmont	35,620					35,620		
Columbiana	43,998	34,212				5,707		4,079
Coshocton	13,272	13,272						
Cuyahoga	209,333				209,333			
Harrison	24,497		24,497					
Hocking	17,507	3,800	13,707					
Holmes	3,193	3,193						
Knox	9,016					9,016		
Licking	36,080		36,080					
Mahoning	122,452			122,452				
Marion	161,385	161,385						
Medina	46,606	46,606						
Muskingum	49,065	10,995		38,070				
Noble	425	425						
Perry	39,940	39,940						
Richland	6,785	6,785						
Stark	92,812	4,915					87,897	
Tuscarawas	363,828	279,351	4,477			80,000		
Wayne	24,000	24,000						
<b>TOTAL</b>	<b>1,301,416</b>	<b>630,131</b>	<b>78,761</b>	<b>160,522</b>	<b>209,333</b>	<b>130,693</b>	<b>87,897</b>	<b>4,079</b>

## SALT

Salt was produced by 3 companies at 5 operations in 5 Ohio counties during 1993. Total tons of salt sold in 1993 amounted to 3,562,352 tons (+21.5 percent from 1992). Rock salt sales totalled 2,813,754 tons from 2 underground mines, one each in Cuyahoga and Lake Counties. Three brining operations, one each in Licking, Summit, and Wayne Counties, sold a total of 10,531 tons of salt in brine and 738,067 tons of evaporated salt. Reported known production of salt was 3,871,260 tons in 1993. Ohio ranks fourth nationally in the production of salt. The top five states, in descending order of production, are Louisiana, Texas, New York, Ohio, and Kansas.<sup>14</sup>

The total value<sup>15</sup> of the salt sold in 1993 was \$48,066,967. Average price per ton for all salt sold in 1993 was \$13.49. Average price per ton of rock salt was \$13.37 and of salt in brine and evaporated salt was \$13.95.

An annual average of 163 employees worked an average of 281 days in 1993 to produce salt. Total wages of \$13,834,068 were paid to a total of 336 employees (163 production employees and 173 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$41,173. The primary use for Ohio salt in 1993 was ice control. Salt also was used as an additive in animal feed, for cattle blocks, and as a commercial and residential water-softening agent.

<sup>14</sup>Preliminary information from U.S. Bureau of Mines.

<sup>15</sup>Includes reported and estimated values. See footnote 1, p. 4.

<sup>16</sup>Includes estimated values only. See footnote 1, p. 4.

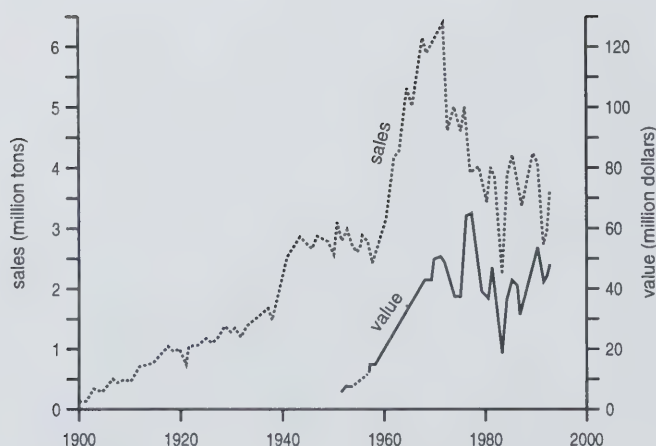


FIGURE 16.—Sales and value of salt in Ohio. Value line dashed where data not available.

## GYPSUM

Gypsum was produced by 1 company at 1 operation in Ottawa County during 1993. Gypsum production and sales (all material was for captive use) totalled 233,172 tons (+13.7 percent from 1992). The reported value<sup>16</sup> of the gypsum sold was \$2,215,135. Average price per ton was \$9.50. Ohio ranks 16th nationally in the production of gypsum. The top five states, in descending order of production, are Oklahoma, Iowa, Texas, Michigan, and Nevada.<sup>14</sup>

An annual average of 13 employees worked 314 days in 1993 producing gypsum. Total wages of \$556,918 were paid to a total of 15 employees (13 production employees and 2 nonproduction employees). The average annual wage in 1993 was \$37,128. The sole use of gypsum from this operation is for the manufacture of wallboard.

## PEAT

Peat was produced by 4 companies at 4 operations in 3 Ohio counties during 1993. Peat sales (including material for captive use) totalled 17,833 tons (+2.0 percent from 1992). Champaign, Portage, and Williams Counties accounted for 100 percent of the total sales. The total value of the peat sold in 1993 was \$173,390. Average price per ton was \$9.72. Reported known production was 11,029 tons. Ohio ranks 13th nationally in the production of peat. The top five states, in descending order of production, are Florida, Michigan, Wisconsin, Minnesota, and Illinois.<sup>14</sup>

Most peat operations in Ohio are owner operated. Therefore, employment information is not available.

Peat produced in Ohio was used primarily for mulch, soil mix, and worm culture.

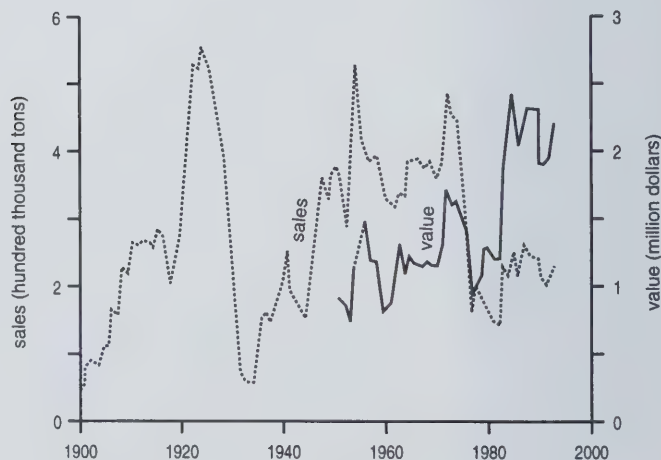


FIGURE 17.—Sales and value of gypsum in Ohio. Value line dashed where data not available. Some figures were calculated because actual figures were not reported in order to maintain confidentiality.





FIGURE 18.—Sales and value of peat in Ohio.

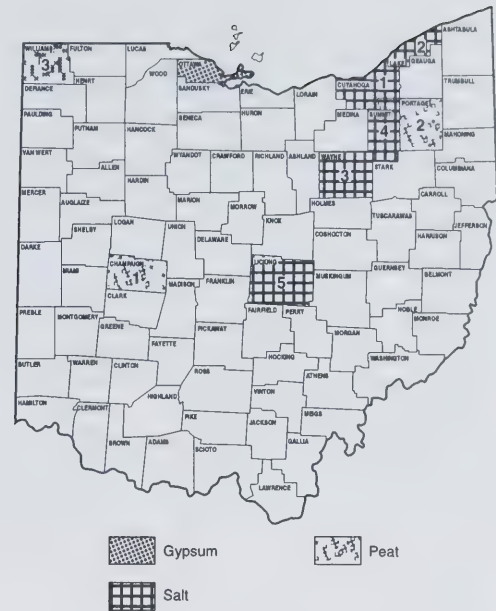


FIGURE 19.—Counties producing salt, gypsum, and peat in Ohio in 1993, and their ranking in sales.



Wallboard plant and gypsum storage shed of Celotex Corporation in Ottawa County. Circa 1960.

## OIL AND GAS

*This information is summarized from M. P. McCormac, 1994, 1993 Ohio oil and gas developments: Ohio Department of Natural Resources, Division of Oil and Gas*

The Division of Oil and Gas issued 904 drilling permits for oil and gas in 1993; the Division estimates that 822 wells were actually drilled in 1993. This is only the seventh time since 1888 that fewer than 1,000 wells were drilled annually in Ohio. Wells were drilled in 46 of Ohio's 88 counties. The top five counties in number of new wells drilled in 1993 were Muskingum, Coshocton, Holmes, Portage, and Stark. The Division of Oil and Gas received 695 well completion reports; 532 wells were productive and 163 were dry holes for a completion rate of 76.5 percent.

The total reported crude oil production in Ohio in 1993 was 8,282,023 barrels, a 9.9 percent decrease from 1992. Through 1993, Ohio wells have produced 1,028,167,450 barrels of crude oil. The value of crude oil produced in Ohio

in 1993 was \$142,995,220, a decrease of 18.0 percent. Average price per barrel in 1993 was \$17.26, a 7.7 percent decrease from the 1992 price.

Natural gas production in Ohio in 1993 was 135,938,848 MCF, a 6.1 percent decrease from 1992. This production figure includes an estimated 1,345,929 MCF of gas used on the lease. The value of natural gas produced in Ohio in 1993 was \$333,769,291, a decrease of 0.9 percent from 1992. The value of the estimated volume of gas used on the lease was not used in computing this value. The average price per MCF in 1993 was \$2.48, a 5.5 percent increase from 1992.

The combined total value of Ohio oil and gas production in 1993 was \$476,764,511, a decrease of 6.7 percent from 1992, the lowest market value since 1979.

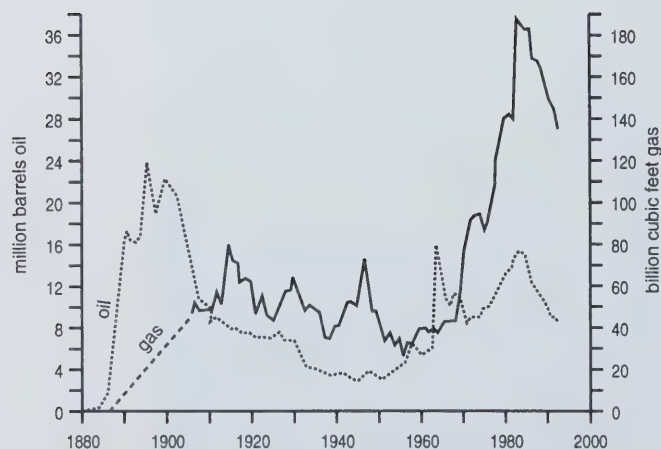


FIGURE 20.—Production of oil and gas in Ohio.

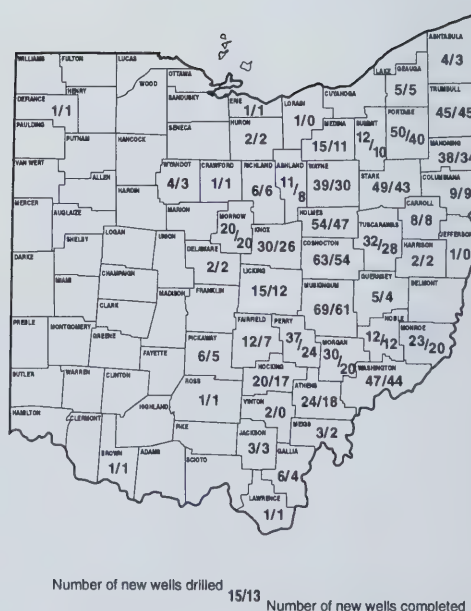


FIGURE 21.—New wells drilled for oil and gas in 1993, by county.



TABLE 27. — 1993 Ohio summary of new oil and gas well completions by county

County <sup>1,2</sup>	Development wells		Exploratory wells		Total wells	Percent productive	Drilled footage		
	Productive	Dry	Productive	Dry			Productive	Dry	Total
Ashland	3	2	3	0	8	75.00	20,619	4,885	25,504
Ashtabula	3	0	0	0	3	100.00	10,686	0	10,686
Athens	13	5	0	0	18	72.22	52,282	8,844	61,126
Brown	0	0	0	1	1	0.00	0	3,350	3,350
Carroll	8	0	0	0	8	100.00	43,253	0	43,253
Columbiana	8	1	0	0	9	88.89	44,794	8,434	53,228
Coshocton	29	10	4	11	54	61.11	173,313	119,559	292,872
Crawford	0	0	0	1	1	0.00	0	3,755	3,755
Defiance	0	0	0	1	1	0.00	0	3,330	3,330
Delaware	0	0	0	2	2	0.00	0	8,279	8,279
Erie	0	0	1	0	1	100.00	3,876	0	3,876
Fairfield	0	1	2	4	7	28.57	10,267	17,068	27,335
Gallia	4	0	0	0	4	100.00	6,965	0	6,965
Geauga	5	0	0	0	5	100.00	19,940	0	19,940
Guernsey	4	0	0	0	4	100.00	14,528	0	14,528
Harrison	2	0	0	0	2	100.00	12,037	0	12,037
Hocking	5	2	7	3	17	70.59	46,023	22,204	68,227
Holmes	29	11	4	3	47	70.21	180,694	86,289	266,983
Huron	0	1	0	1	2	0.00	0	8,496	8,496
Jackson	0	0	0	3	3	0.00	0	11,846	11,846
Knox	15	3	3	5	26	69.23	54,652	35,413	90,065
Lawrence	1	0	0	0	1	100.00	740	0	740
Licking	7	2	1	2	12	66.67	16,174	15,435	31,609
Mahoning	34	0	0	0	34	100.00	185,809	0	185,809
Medina	3	0	3	5	11	54.55	24,887	26,657	51,544
Meigs	2	0	0	0	2	100.00	6,898	2,586	9,484
Monroe	20	0	0	0	20	100.00	54,252	0	54,252
Morgan	19	1	0	0	20	95.00	74,812	1,100	75,912
Morrow	5	12	2	1	20	35.00	25,240	48,541	73,781
Muskingum	37	6	8	10	61	73.77	224,641	96,205	320,846
Noble	10	0	2	0	12	100.00	61,501	0	61,501
Perry	11	3	5	5	24	66.67	61,857	29,950	91,807
Pickaway	0	0	2	3	5	40.00	5,859	9,587	15,446
Portage	34	3	1	2	40	87.50	223,290	37,202	260,492
Richland	2	1	1	2	6	50.00	12,846	11,684	24,530
Ross	0	0	1	0	1	100.00	3,471	0	3,471
Stark	41	2	0	0	43	95.35	199,268	13,339	212,607
Summit	10	0	0	0	10	100.00	41,355	0	41,355
Trumbull	45	0	0	0	45	100.00	211,404	0	211,404
Tuscarawas	7	1	6	14	28	46.43	88,179	111,975	200,154
Washington	38	4	0	2	44	86.36	130,975	19,013	149,988
Wayne	18	3	3	6	30	70.00	113,370	53,873	167,243
Wyandot	0	0	1	2	3	33.33	1,792	4,141	5,933
TOTAL	472	74	60	89	695	76.55	2,462,549	823,040	3,285,589

<sup>1</sup>No wells were drilled in the following counties in 1993: Adams, Allen, Auglaize, Belmont, Butler, Champaign, Clark, Clermont, Clinton, Cuyahoga, Darke, Fayette, Franklin, Fulton, Greene, Hamilton, Hancock, Hardin, Henry, Highland, Lake, Logan, Lucas, Madison, Marion, Mercer, Miami, Montgomery, Ottawa, Paulding, Pike, Preble, Putnam, Sandusky, Scioto, Seneca, Shelby, Union, Van Wert, Warren, Williams, and Wood.

<sup>2</sup>No well completion information was reported for the following counties in 1993: Jefferson, Lorain, Vinton.

TABLE 28. — 1993 Ohio summary of new oil and gas well completions by producing zone

Producing zone	No. of producing wells	No. of dry holes	Total no. of wells	Total footage	Percent productive
Pennsylvanian undifferentiated	5	4	9	8,841	55.56
Upper Mississippian undifferentiated	3	2	5	7,205	60.00
Lower Mississippian "1st & 2nd Berea"	38	9	47	68,708	80.85
Devonian Ohio Shale	28	2	30	79,047	93.33
Oriskany	5	0	5	21,322	100.00
Silurian "Newburg"	1	0	1	5,136	100.00
"Clinton-Medina"	279	7	286	1,328,503	97.55
Lower Ordovician Trenton-Gull River	2	1	3	6,996	66.67
Beekmantown	4	1	5	34,860	80.00
Cambrian-Ordovician Rose Run	133	86	219	1,328,866	60.73
Cambrian Trempealeau	34	45	79	371,680	43.04
Kerbel-Mt. Simon	0	1	1	5,021	0.00
Precambrian	0	5	5	19,404	0.00
TOTAL	532	163	695	3,285,589	76.55

TABLE 29. — Ohio counties<sup>1</sup> and their state mine number abbreviations<sup>2</sup>

County	Abbreviation	County	Abbreviation	County	Abbreviation
Adams	Ads	Hamilton	Hmn	Noble	Ne
Allen	An	Hancock	Hk	Ottawa	Oa
Ashland	Ald	Hardin	Hdn	Paulding	Pg
Ashtabula	Asa	Harrison	Hn	Perry	Py
Athens	As	Henry	Hy	Pickaway	Pky
Auglaize	Ae	Highland	Hd	Pike	Pke
Belmont	Bt	Hocking	Hg	Portage	Pe
Brown	Bn	Holmes	Hs	Preble	Pre
Butler	Br	Huron	Hrn	Putnam	Pm
Carroll	Cl	Jackson	Jkn	Richland	Rd
Champaign	Cpn	Jefferson	Jfn	Ross	Rs
Clark	Ck	Knox	Kx	Sandusky	Sy
Clermont	Ct	Lake	Lke	Scioto	So
Clinton	Cln	Lawrence	Le	Seneca	Sa
Columbiana	Ca	Licking	Lg	Shelby	Shy
Coshocton	Cn	Logan	Lgn	Stark	Sk
Crawford	Cd	Lorain	Ln	Summit	St
Cuyahoga	Cya	Lucas	Ls	Trumbull	Tl
Darke	Dke	Madison	Mdn	Tuscarawas	Ts
Defiance	De	Mahoning	Mg	Union	Un
Delaware	Del	Marion	Mn	Van Wert	Vt
Erie	Ee	Medina	Ma	Vinton	Vn
Fairfield	Fd	Meigs	Ms	Warren	Wan
Fayette	Fe	Mercer	Mr	Washington	Wn
Franklin	Fn	Miami	Mi	Wayne	We
Fulton	Ftn	Monroe	Me	Williams	Ws
Gallia	Ga	Montgomery	My	Wood	Wd
Geauga	Gea	Morgan	Mon	Wyandot	Wt
Greene	Ge	Morrow	Mw		
Guernsey	Gy	Muskingum	Mum		

<sup>1</sup>Brown County reported no production or sales of mineral commodities in 1993.<sup>2</sup>As used for Division of Mines mine numbers.



## 1993 OHIO ALPHABETICAL DIRECTORY OF PRODUCING COAL-MINE OPERATORS

*For those mines for which the Division of Mines has not assigned a state mine number, a letter designation is used (example: Bt-C).*

*The designation (u) following the map-location number indicates an underground mine.*

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1993 production (tons)	State mine number	Division of Reclamation permit number
Addington, Inc. 9431 U.S. Rte. 60 Ashland, KY 41102-9527 606-928-3433 Michael Quillen, pres.	Dundas Job (602)	Vinton	1,006,868	Vn-191	D-0197, D-0867, D-0957, D-1004
American Industries & Resources Corp. P.O. Box 2388 Wintersville, OH 43952 614-264-7704 John Dumbola, pres.	A.I.R.C. Realty (710)	Jefferson	15,672	Jfn-832	D-1042
American Landfill, Inc. 7916 Chapel St. SE Waynesburg, OH 44688 216-856-8800 Scott Porter, pres.	American Landfill, Inc. (631)	Stark	24,111	Sk-246	IM-1114
Anthony Mining Co., Inc. P.O. Box 1298 Steubenville, OH 43952 614-765-4185 Joseph J. Sperlazza, pres.	Pipo #51 (189)	Jefferson	16,210	Jfn-788	D-0327, D-0983
Avis Coal Co. P.O. Box 3373 Zanesville, OH 43702-3373 614-454-2583 James F. Graham, pres.	Avis Coal Co. (663)	Perry	235,287	Py-A	D-0931
B & N Coal, Inc. P.O. Box 100 Dexter City, OH 45727 614-783-3575 Carl Baker Jr., pres.	Shevlin (495) Pourhouse (626) Lee (627) Arnold (628) Shilling (493) Ullman (514) <i>Total mines: 6</i>	Noble Noble Noble Noble Noble Noble <i>Total tons:</i>	36,704 376,433 101,557 80,926 108,946 124,199 828,765	Ne-150 Ne-154 Ne-155 Ne-156 Ne-1008 Ne-151	D-0787 D-0900 D-0958 D-0932 D-0706 D-0807
Bannock Coal Co. P.O. Box 143 Bannock, OH 43972 614-968-3504 Tony Gentile, pres.	Simon (569)	Belmont	6,153	Bt-1189	D-0914
Belden Brick Co. P.O. Box 20910 Canton, OH 44701 216-852-2424 William H. Belden, Jr., pres.	Moomaw Pit (667) Belden Pit (261) Wallick Pit (720) Shanesville Pit (634) <i>Total mines: 4</i>	Tuscarawas Tuscarawas Tuscarawas Tuscarawas <i>Total tons:</i>	1,536 461 5,439 1,490 8,926	Ts-1517 Ts-1646 Ts-1841 Ts-1939	IM-46 IM-44 IM-45 IM-47
Belville Mining Co., Inc. P.O. Box 834 Ironton, OH 45638 614-643-2331 Robert E. Belville, pres.	Brady Creek (491)	Lawrence	9,611	Le-B	IM-1188, D-0746
Benedict, Inc. P.O. Box 315 McArthur, OH 45651 614-596-5226 W. E. Engle, pres.	Mitchell Hollow (357) Waldron Pit (419) Allied West (420) Austin Pit (423) <i>Total mines: 4</i>	Vinton Vinton Vinton Vinton <i>Total tons:</i>	103,648 103,649 103,648 103,649 414,594	Vn-172 Vn-183 Vn-184 Vn-187	D-0445 D-0633 D-0524, D-0609 D-0672
B. L. Black, Inc. R.D. #1, Box 152 Cowpath Rd. Bloomingdale, OH 43910 614-944-1644 Rodney L. Nelson, treasurer	Black 2 (683)	Belmont	24,125	Bt-B	D-0998
Blum Coal Co. Scio-Carrollton Rd. P.O. Box 232 Carrollton, OH 44615-0232 216-627-2670 Raymond Blum, owner	Minick Job (471)	Columbiana	2,804	Ca-950	D-0768
Boich Mining Co. P.O. Box 148 Bloomingdale, OH 43910 614-282-2116 Abe Bryan, pres.	Betsy Mine (178)	Jefferson	352,217	Jfn-528	D-0247, D-0563, D-0803, D-0873

## 1993 OHIO ALPHABETICAL DIRECTORY OF PRODUCING COAL-MINE OPERATORS — Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1993 production (tons)	State mine number	Division of Reclamation permit number
Buckeye-Industrial Mining Co. P.O. Box 389 Lisbon, OH 44432 216-337-9511 John C. Grisham, pres.	Myers/Whit (447) West Point Mine #8 (608) (u) Mountain Spring Coal Co. #6 (529) (u) West Point (647) West Point #5 (647) (u) Grim (687) Beard (654) Cable (666) Robertsville (718) <i>Total mines: 9</i>	Carroll Columbiana Columbiana Columbiana Columbiana Columbiana Jefferson Stark Stark <i>Total tons:</i>	26,673 69,931 336,790 164,581 84,051 133,203 15,973 96,280 1,198 <i>928,680</i>	Cl-238 Ca-509 Ca-978 Ca-987 Ca-991 Ca-BI Jfn-1286 Sk-249 Sk-BI	D-0703 D-0052-2 D-0874 D-0928 D-0928 D-0994 D-0816, D-0818 D-0960 D-1043
Buckingham Mining & Reclamation, Inc. P.O. Box 31 Shawnee, OH 43782-0031 614-394-2644 Gary L. Allen, pres.	Roger's Hollow (629) Hazelton Mine (664) Bristol Mine (665) <i>Total mines: 3</i>	Perry Perry Perry <i>Total tons:</i>	23,533 14,623 26,134 <i>64,290</i>	Py-B Py-BM Py-BMR	D-0940 D-0936, D-0977 D-0980, D-1014, D-1050
C & E Coal, Inc. Rte. 2 Box 177 Toronto, OH 43964 614-537-1498 Amos L. Rawson, pres.	Perrino (646)	Columbiana	118,372	Ca-986	D-0975
C L A Coal Co. 4412 Pleasant Valley Rd. SE Dennison, OH 44621 614-922-3954 Cynthia McCartney, pres.	Berresford (649)	Guernsey	27,385	Gy-C	D-0910
Cedar Heights Clay Co. Div. of Resco Products, Inc. P.O. Box 295 Oak Hill, OH 45656-0295 W. T. Tredennick, pres.	Cedarloo/Jenkins/Greer (705) Katie Walke (706) <i>Total mines: 2</i>	Jackson Jackson <i>Total tons:</i>	5,310 470 <i>5,780</i>	Jkn-1007 Jkn-CH	IM-24, D-0813 IM-1060
Central Ohio Coal Co. P.O. Box 98 Cumberland, OH 43732 614-962-2013 Gary Dimmerling, gen. mgr.	Muskingum Mine (228)	Morgan, Muskingum, Noble	2,585,929	Ne-41	D-0056, D-0127, D-0261, D-0274, D-0455, D-0559, D-0678, D-0820, D-0839, D-1034, IM-921
Commercial Minerals, Inc. 10900 South Ave. P.O. Box 217 North Lima, OH 44452-0217 216-549-2165 W. T. Mackall, pres.	Lisbon (472) Black Road (612) Ketchum East (688) <i>Total mines: 3</i>	Columbiana Columbiana Columbiana <i>Total tons:</i>	54,891 3,221 25,299 <i>83,411</i>	Ca-951 Ca-981 Ca-CM	D-0741 D-0941 D-0950, D-0999
Consolidation Coal Co. Eastern Region Cadiz, OH 43907 614-942-4335 Samuel Shrader, sr. v. pres., mining	Mahoning Valley #36 (150)	Harrison	367,403	Hn-700	D-0051, D-0054, D-0334, D-0414, D-0452, D-0784, D-0826
Costain Coal, Inc. P.O. Box 729 Gnadenhutzen, OH 44629 614-254-4395 Thomas H. Parker, pres.	Anco Mining, Inc. (534) Costain Coal, Inc. (256) <i>Total mines: 2</i>	Guernsey Tuscarawas <i>Total tons:</i>	65,153 314,422 <i>379,575</i>	Gy-310 Ts-115	D-0842 D-0190, D-0217, D-0398, D-0533, D-0715, D-0986
Cravat Coal Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 614-942-4656 Anthony Puskarich, pres.	Rice Pit (681) Fairpoint Pit (682) Stewart/Saffell Pit (605) Hopedale Pit (619) <i>Total mines: 4</i>	Belmont Belmont Belmont Harrison <i>Total tons:</i>	65,034 17,439 43,604 21,934 <i>148,011</i>	Bt-1201 Bt-1202 Bt-C Hn-228	D-1020 D-0483-5 D-0961 D-0934
Crooksville Coal Co., Inc. P.O. Box 149 Crooksville, OH 43731 614-982-6651 Ralph L. Allen, pres.	Crooksville Strip (239)	Perry	87,481	Py-317	D-0057, D-0085, D-0189, D-0461, D-0615, D-0875
D. & D. Mining Co. 3379 E. Garfield Rd. New Springfield, OH 44443 216-549-3127 Donald Thompson, pres.	Saviers Mine (441)	Columbiana	85,739	Ca-348	IM-976, D-1002
D & L Contractors, Inc. P.O. Box 446 Flushing, OH 43977 614-968-4913 Walter Dombroski, pres.	D & L Strip (185) D & L Strip (708) <i>Total mines: 2</i>	Jefferson Jefferson <i>Total tons:</i>	913 24,783 <i>25,696</i>	Jfn-780 Jfn-829	D-0126 D-1006

## 1993 OHIO ALPHABETICAL DIRECTORY OF PRODUCING COAL-MINE OPERATORS – Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1993 production (tons)	State mine number	Division of Reclamation permit number
Daron Coal Co., Inc. 3296 Pleasant Valley Rd. SE Dennison, OH 44621 614-922-6829 Ronald Selway, pres.	Pleasant Valley Mine (433) Reed Mine (671) <i>Total mines: 2</i>	Tuscarawas Tuscarawas <i>Total tons:</i>	80,878 117,116 197,994	Ts-1991 Ts-DC	D-0702 D-0954
Dennis Clay Co. 11123 State Rte. 37 East New Lexington, OH 43764 614-342-5473 Tom L. Dennis, owner	County Rd. 7 Mine (590)	Perry	359	Py-338	IM-1092
Double "R" Mining 1054 Blackhawk Rd. Beaver Falls, PA 15010 216-424-7609 Raymond L. Barker, pres.	Burt Strip (528)	Columbiana	5,344	Ca-985	D-0821
ENZ, Inc. 3497 University Dr. NE New Philadelphia, OH 44663 216-339-5313 James R. Demuth, pres.	Creighton Pit (246)	Stark	87,018	Sk-208	D-0295, D-0827, D-1005, D-1015
East Fairfield Coal Co. 10900 South Ave. P.O. Box 217 North Lima, OH 44452-0217 216-549-2165 R. E. Mackall, pres.	Gavers Mine (614)	Columbiana	38,579	Ca-984	D-0952
R. A. Eberts Co., Inc. P.O. Box 191 Jackson, OH 45640 614-682-3506 Phil A. Bowman, pres.	Green Pit (418) B. & D. Pit (564) <i>Total mines: 2</i>	Vinton Jackson, Vinton <i>Total tons:</i>	178,663 213,124 391,787	Vn-182 Vn-192	D-0631 D-0207
Elk Coal, Inc. P.O. Box 165 McArthur, OH 45651 614-596-2132 John L. Cline, pres.	Elk Strip (675)	Vinton	35,857	Vn-194	D-0973
F. & M. Coal Co. Costonia Rd. Box 171 Toronto, OH 43964 614-544-5203 Edward Fiala, owner	F. & M. Strip (186)	Jefferson	37,977	Jfn-784	D-0091, D-0728
Fairpoint Coal Co. P.O. Box 158 Fairpoint, OH 43927 614-695-3174 Dennis Zaccagnini, pres.	Pogue Run (19)	Belmont	24,203	Bt-927	D-0483
John Glenn Mining Co. 6556 State Route 45 Lisbon, OH 44432 216-424-5612 John Glenn, pres.	Bailey Mine (689)	Columbiana	8,242	Ca-JG	D-1008
Green Basin Coal, Inc. Route 1, Box 49C Strasburg, OH 44680 216-878-7740 Jerry K. Kohl, pres.	Blackhawk (668)	Tuscarawas	14,856	Ts-2024	IM-1087
Harrison Mining Corp. P.O. Box 176 Cadiz, OH 43907 614-942-8220 John A. McNab, pres.	Nelms Mine #2 (580) (u)	Harrison	1,175,173	Hn-710	D-0426
Holmes Limestone Co. P.O. Box 295 Berlin, OH 44610 216-893-2721 Merle Mullet, pres.	241 Plant (161) Charm (164)  557 (538) Bolivar Mine (363) Charm-Grove (719) Stone Creek (601) Clark-Reynolds (670) Dennison (674) <i>Total mines: 8</i>	Holmes Holmes  Holmes Stark Stark Tuscarawas Tuscarawas Tuscarawas <i>Total tons:</i>	17,355 40,753  68,010 16,807 4,926 182,893 37,469 127,693 495,906	Hs-67 Hs-86  Hs-97 Sk-235 SK-HLC Ts-2023 Ts-2045 Ts-HLC	IM-3, IM-768 D-0193, D-0508, D-0913, D-0942, D-1039 D-0775, D-0885 IM-945, D-0865 D-1053 D-0796 D-1001 D-0969



## 1993 OHIO ALPHABETICAL DIRECTORY OF PRODUCING COAL-MINE OPERATORS – Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1993 production (tons)	State mine number	Division of Reclamation permit number
Horizon Coal Corp. 11415 Erie Ave. SW P.O. Box 618 Beach City, OH 44608 216-756-2414 Merle Mullet, pres.	James (673)	Tuscarawas	201,725	Ts-2038	D-0965
J. C. Coal Co., Inc. P.O. Box 426 Junction City, OH 43748 614-342-4226 Ralph L. Allen, pres.	Rendville Strip (717)	Perry	7,904	Py-JC	D-1048
JD Mining, Inc. 3497 University Dr. NE New Philadelphia, OH 44663 216-339-5313 John R. Demuth, pres.	Ott-Hagloch (375)	Tuscarawas	74,151	Ts-1996	D-0612
James Bros. Coal Co. 190 S. Main St. P.O. Box 425 Magnolia, OH 44643 216-866-9388 Kermit & Richard James, Jr., partners	James Bros. Coal Co. (61)	Carroll	2,449	Cl-162	D-0408
Joyce Coal Co., Inc. P.O. Box 264 St. Clairsville, OH 43950 614-782-1330 Mario Posock, pres.	Crescent Pit (524) Nemo Pit (656) <i>Total mines: 2</i>	Belmont Jefferson	17,141 65,924 <i>Total tons: 83,065</i>	Bt-1184 Jfn-821	D-0799 D-0937
K.C.C.I. P.O. Box 24 Morristown, OH 43759 614-782-1087 George Krulock, pres.	Susie Mine (519)	Belmont	71,220	Bt-1179	D-0840
Kimble Clay & Limestone Co. Rte. 1 Box 386 Dover, OH 44622 216-343-1226 Floyd E. Kimble, owner	Kimble Clay & Limestone Co. (262) Kimble Clay & Limestone Co. (598) Kimble Clay & Limestone Co. (600) Kimble Clay & Limestone Co. (638) Kimble Clay & Limestone Co. (509) <i>Total mines: 5</i>	Tuscarawas Tuscarawas Tuscarawas Tuscarawas Tuscarawas	30,871 149,305 74,268 63,892 5,718 <i>Total tons: 324,054</i>	Ts-1727 Ts-2019 Ts-2022 Ts-2037 Ts-K3	IM-9 D-0852 D-0878 D-0921 D-0729
King Quarries, Inc. P.O. Box 72 Caldwell, OH 43724 614-732-4185 David King, pres.	King Quarries, Inc. (715) Nau (551) <i>Total mines: 2</i>	Muskingum Noble	389 11,089 <i>Total tons: 11,478</i>	Mum-K Ne-152	D-1017 D-0859
L & M Mineral Co. 5205 State Rte. 39 Star Rte. Millersburg, OH 44654 216-893-2227 John E. Ling, Jr., pres.	Evans-Cox (264) Luikert (267) Spring (411) Rainsberg (724) <i>Total mines: 4</i>	Tuscarawas Tuscarawas Tuscarawas Tuscarawas	4,136 38,101 11,409 2,712 <i>Total tons: 56,358</i>	Ts-1884 Ts-1914 Ts-1982 Ts-H1	IM-6 D-0701 IM-621 IM-927
Red Malcuit, Inc. 707 S. Wooster Ave. P.O. Box 166 Strasburg, OH 44680-0166 216-878-7212 Mark A. Malcuit, pres.	RMI #3 (556) RMI #2 (510) RMI #1 (640) <i>Total mines: 3</i>	Tuscarawas Tuscarawas Tuscarawas	99,358 70,754 1,524 <i>Total tons: 171,636</i>	Ts-2006 Ts-2007 Ts-RM	D-0800 D-0737 D-0904
Marietta Coal Co. 67705 Friends Church Rd. St. Clairsville, OH 43950 614-695-2197 George Nicolozakes, pres.	Borovich-Neitzelt et al. (13) Vannest-Moore et al. (570) Barack-Henthorne et al. (38) Oliver-Clark et al. (58) Denham-Albaugh et al. (452) Porterfield-Harrison Leasing (523) AT & T (604) <i>Total mines: 7</i>	Belmont Belmont Belmont Belmont Belmont Belmont Belmont	571 72,536 150,858 3,938 44,583 162,437 127,895 <i>Total tons: 562,818</i>	Bt-147 Bt-771 Bt-1104 Bt-1129 Bt-1164 Bt-1183 Bt-AT	D-0022 D-0771 D-0088 D-0491 D-0742 D-0845 D-0922
Jack Martin North Main St. Ext. P.O. Box 272 Cadiz, OH 43907 614-942-2295 Jack Martin, owner	Martin Mine (700)	Harrison	1,714	Hn-755	D-1000

## 1993 OHIO ALPHABETICAL DIRECTORY OF PRODUCING COAL-MINE OPERATORS – Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1993 production (tons)	State mine number	Division of Reclamation permit number
Mesa Coal Corp. P.O. Box 98 Big Prairie, OH 44611 216-496-2931 James R. Small, pres.	Conway (622)	Harrison	15,701	Hn-751	D-0956
Miller Mining, Inc. P.O. Box 525 Sugarcreek, OH 44681 216-852-4511 Olen Miller, pres.	Beachy (703) Wasteland Management (704) Mast-Miller et al. (559) Mizer (635) Spooky Hollow (721) General Clay et al. (637) Wilmar Farms (725) Swihart (642) <i>Total mines: 8</i>	Holmes Holmes Tuscarawas Tuscarawas Tuscarawas Tuscarawas Tuscarawas Tuscarawas	26,008 1,509 84,456 20,069 10,216 378,659 29,606 1,983 <i>Total tons: 552,506</i>	Hs-M Hs-MMI Ts-2010 Ts-2027 Ts-2035 Ts-GC Ts-M1 Ts-WS	D-1021 D-1044 D-0849 D-0948 D-1010 D-0962, D-0967 D-1023 D-0953
Myers Mining P.O. Box 218 Carrollton, OH 44615 216-739-2009 James L. Myers, owner	Harlem Mine #2 (607) Harlem Mine #3 (644) Harlem Mine #4 (686) <i>Total mines: 3</i>	Carroll Carroll Carroll	3,523 31,040 2,727 <i>Total tons: 37,290</i>	Cl-249 Cl-HM Cl-HM1	D-0933 D-0992 D-1035
Northshore Coal, Inc. 100 W. Main St. St. Clairsville, OH 43950 614-695-7237 Charles F. Dawson, pres.	Buckeyeville #7 (648)	Guernsey	46,018	Gy-315	D-0951
Ohio River Collieries, Inc. P.O. Box 128 Bannock, OH 43972 614-968-3504 Tony Gentile, pres.	7400 Pit (27)	Belmont	1,656	Bt-1074	D-0340
Ohio Valley Coal Co. 56854 Pleasant Ridge Rd. Alledonia, OH 43902 216-765-1240 Robert E. Murray, pres.	Powhatan #6 (3) (u)	Belmont	3,968,101	Bt-68	D-0360
Oxford Mining Co. 2313 Cambridge Rd. P.O. Box 427 Coshocton, OH 43812 614-623-0015 Charles C. Ungurean, pres.	Tri-Mac (575) Shurtz (616) Waters (588) Adamsville (716) <i>Total mines: 4</i>	Coshocton Coshocton Muskingum Muskingum	28,779 272,560 707 35,855 <i>Total tons: 337,901</i>	Cn-831 Cn-OX Mum-901 Mum-O	D-0870 D-0964 D-0898 D-1030
Penn Eagle Coal Corp. P.O. Box 151 Wellsburg, WV 26070 304-737-0696 Anthony K. Worthley, v. pres.	Salt Run Mine (181) B & S Mine (659) <i>Total mines: 2</i>	Jefferson Jefferson	1,859 8,884 <i>Total tons: 10,743</i>	Jfn-831 Jfn-PE	D-0843 IM-1162
Quarto Mining Co. Subsidiary of Consolidation Coal Co. 1029 Market St. Clarington, OH 43915 614-458-2016 Ben Statler, v. pres.	Powhatan #4 (215) (u)	Monroe	827,377	Me-4	D-0433
R & F Coal Co. 538 North Main St. Cadiz, OH 43907 614-942-2186 Doug Poush, pres.	Meigs-Phillips (456) Dudek-Bannock (568) Miklovic (684) Watson-Huhn (314) Bartolec South/Cartwright (124) Bartolec North-Adjacent (123) Taylor (398) Bartolec II (691) Porcher Area (532) Wolf-Isleta (577) Isleta Central (692) Pollock (693) Harrah West (581) Sally Buffalo (650) Branson Ridge (699) Myers North (703) Tasa (399) Arrowhead Adjacent (544) Friendship Park (658) Friendship II-Jeffco (711) Hamlin-Harding et al. (723) DeLong-Wilsterman (508) <i>Total mines: 22</i>	Belmont Belmont Belmont Belmont, Guernsey Coshocton Coshocton Coshocton Coshocton Coshocton Coshocton Coshocton Coshocton Harrison Harrison Harrison Harrison Jefferson Jefferson Jefferson Tuscarawas Tuscarawas	95,566 751,764 194,124 120,364 143,335 13,564 9,863 8,159 99,741 615,814 2,584 120,333 22,975 11,034 435,994 58,219 23,351 7,145 271,719 41,642 4,006 41,555 <i>Total tons: 3,092,851</i>	Bt-1168 Bt-1188 Bt-M Gy-304 Cn-768 Cn-779 Cn-820 Cn-P Cn-PA Cn-RF Cn-RF1 Cn-RF2 Hn-748 Hn-753 Hn-754 Hn-MN Hn-225 Jfn-817 Jfn-824 Jfn-J Ts-2043 Ts-DW	D-0619 D-0908 D-1009 D-0262 D-0208 D-0320 D-0623 D-1027 D-0850 D-0689 D-1012 D-0691 D-0797 D-0991 D-0829 D-0772 D-0593 D-0860 D-0564 D-0995 D-1047 D-0792

## 1993 OHIO ALPHABETICAL DIRECTORY OF PRODUCING COAL-MINE OPERATORS – Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1993 production (tons)	State mine number	Division of Reclamation permit number
R & R Minerals, Inc. 7360 Skyview Rd. Millersburg, OH 44654 216-674-4926 Gary R. Ross, pres.	Adams (578) Maynard (694) Fresno (695) <i>Total mines: 3</i>	Coshocton Coshocton Coshocton <i>Total tons:</i>	23,508 4,546 767 28,821	Cn-RR Cn-RR1 Cn-RR2	D-0872 D-0974 D-1033
R. T. G., Inc. P.O. Box 250 Byesville, OH 43723 614-439-4399 James E. Rossiter, pres.	R. T. G. #7 (618) R. T. G. #8 (697) R. T. G. #6 (698) <i>Total mines: 3</i>	Guernsey Guernsey Guernsey <i>Total tons:</i>	99,083 30,261 3,525 132,869	Gy-313 Gy-319 Gy-RTG	D-0907 D-0989 D-0903
Rash Energy, Inc. 3114 U.S. Route 62 Dundee, OH 44624 216-359-5909 Freeman Mullet, pres.	Rash Energy, Inc. (676)	Wayne	3,169	We-R	IM-690
Regal Mining, Inc. 3333 Perron Rd. SE Carrollton, OH 44615 216-739-6596 Daniel J. Smith, pres.	Walters (645)	Carroll	22,538	Cl-W	D-0979
S. & D. Construction Corp. R.R. #1 Box 34A Irondale, OH 43932 614-544-5005 Richard Petrozzi, pres.	New Somerset Mine (712)	Jefferson	99,914	Jfn-SD	D-0677
Sands Hill Coal Co., Inc. 1203 N. Pennsylvania Ave. Wellston, OH 45692 614-384-5659 Jack Huffman, pres.	Walton (651) Sands Hill Strip #5 (623) Hiram West (653) Sands Hill Strip #4 (541) Sands Hill (707) Sands Hill Strip #3 (513) <i>Total mines: 6</i>	Jackson Jackson Jackson Jackson, Vinton Jackson Vinton <i>Total tons:</i>	7,075 409,454 5,400 194,913 13,276 257,197 877,315	Jkn-1066 Jkn-1069 Jkn-1071 Jkn-SH Jkn-SHC Vn-S	D-0808 D-0944 D-1003 D-0861, IM-1068 D-0648 D-0793
Solomon's Mines, Inc. 7732 Salem-Unity Rd. Salem, OH 44460 216-337-0123 Jack Solomon, pres.	Solomon's Mines, Inc. (660)	Mahoning	1,975	Mg-632	IM-808
Southern Ohio Coal Co. P.O. Box 490 Athens, OH 45701 614-286-5051 Jim Tompkins, gen. mgr.	Meigs Mine #31 (212, 300) (u) Meigs Mine #2 (213) (u) <i>Total mines: 2</i>	Meigs, Vinton Meigs <i>Total tons:</i>	1,706,518 2,042,593 3,749,111	Ms-293 Ms-294	D-0354, D-0463 D-0355
Sterling Mining Co. 10900 South Ave. P.O. Box 217 North Lima, OH 44452 216-549-2165 W. Thomas MacKall, pres.	Sterling North (657) (u)	Jefferson	261,792	Jfn-823	D-0949, D-1019
Stewart Coal Co. Lake Alma Rd. P.O. Box 408 Wellston, OH 45692 614-286-4696 William F. Stewart, pres.	Dark Hollow (652)	Jackson	118,042	Jkn-1070	D-0659, D-0732, D-0891, D-0844, D-0884 D-0997
Sugarcreek Clay & Limestone, Inc. P.O. Box 402 Sugarcreek, OH 44681 216-852-4440 Daniel O. Miller, pres.	Sugarcreek Clay & Limestone, Inc. (690) Ladrach-Lang (722) <i>Total mines: 2</i>	Coshocton Tuscarawas <i>Total tons:</i>	4,044 40,905 44,949	Cn-839 Ts-2042	D-0879, D-0996 D-0919, D-0993
Thompson Bros. Mining Co. 3379 E. Garfield Rd. New Springfield, OH 44443 216-549-3979 J. E. Thompson, pres.	Peres Mine (205)	Mahoning	2,862	Mg-65	D-0374
Toronto A & L Coal, Inc. R.D. #2, Box 177 Toronto, OH 43964 614-537-1498 Amos L. Rawson, pres.	James Tunnel Hill (636)	Tuscarawas	8,707	Ts-2040	D-0935



## 1993 OHIO ALPHABETICAL DIRECTORY OF PRODUCING COAL-MINE OPERATORS – Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1993 production (tons)	State mine number	Division of Reclamation permit number
Valley Mining, Inc. 4412 Pleasant Valley Rd. SE Dennison, OH 44621 614-922-3942 Mary J. Brown, pres.	Dellroy (685) Snyder-Bush (696) Smith (582) Greentown (401) York (489) Piergallini (709) Kurtz (714) Lattavo (560) Gibson (595) Taylor (669) <i>Total mines: 10</i>	Carroll Guernsey Harrison Jefferson Jefferson Jefferson Tuscarawas Tuscarawas Tuscarawas <i>Total tons:</i>	18,622 39,975 205,228 23,901 190,599 22,534 2,449 64 1,954 51,878 557,204	Cl-819 Gy-318 Hn-750 Jfn-807 Jfn-813 Jfn-831 Jfn-VM Ts-2011 Ts-2014 Ts-2034	D-0899 D-1025 D-0901 D-0642 D-0740 D-1026 D-1049 D-0822 D-0868 D-0516
Varkony Mining Co. P.O. Box 427 Hopedale, OH 43976 614-937-2777 Stephen & John Varkony, Jr., owners	Varkony Mining Co. (146)	Harrison	74,736	Hn-217	D-0440
W. B. Coal Co., Inc. R.D. 1 Box 40 Bloomingdale, OH 43910 614-282-6503 Wayne Boich, pres.	McGinness Bros. Strip (144) McGinness Bros. #3 (701) McGinness Bros. Strip (655) <i>Total mines: 3</i>	Harrison Harrison Jefferson <i>Total tons:</i>	22,089 34,895 79,281 136,265	Hn-738 Hn-756 Jfn-815	D-0376 D-1045 D-0135
Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 614-682-7787 Phil A. Bowman, v. pres.	Bowman Strip (165)	Jackson	487,671	Jkn-367	D-0205, D-0594, D-0892, D-0968
Weirton Construction Co. 401 Pennsylvania Ave. Weirton, WV 26062 304-748-1400 Donald R. Donell, pres.	#19 (180)	Jefferson	108,708	Jfn-687	D-0404, D-0939
Frank Widmor Coal Co. P.O. Box 176 Blaine, OH 43909 614-635-4811 Frank Widmor, owner	Frank Widmor Coal Co. (603)	Belmont	31,717	Bt-1190	IM-1089
Zoar Mining Co. P.O. Box 550 Zoar, OH 44697 216-874-2434 David W. Johnson, pres.	Zoar Mining Co. (258)	Tuscarawas	2,104	Ts-540	IM-28

### 1993 OHIO DIRECTORY OF COAL-PREPARATION PLANTS AND ASSOCIATED FACILITIES, BY COUNTY

*For those mines for which the Division of Mines has not assigned a state mine number, a letter designation is used (example: Bt-C).*

County	Name, address, telephone number, and president/owner/manager of company	Name of plant (and map location number for coal-preparation plants)	Township	State mine number	Division of Reclamation permit number	Type of facility
Belmont	Consolidation Coal Co. Eastern Region Cadiz, OH 43907 614-942-4335 Samuel Shrader, sr. v. pres., mining	General Services 105	Wheeling	Hn-5		general services
	Cravat Coal Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 614-942-4656 Anthony Puskarich, pres.	Bellaire River Dock Holloway Tipple	Pultney Flushing	Bt-876 Bt-963	D-0687 D-0763	loading dock tipple
	K. C. C. I. P.O. Box 24 Morristown, OH 43759 614-782-1087 George Krulock, pres.	Susie Tipple	Wheeling	Bt-1179	D-0840	tipple
	Marietta Coal Co. 67705 Friends Church Rd. St. Clairsville, OH 43950 614-695-2197 George Nicolozakes, pres.	Marietta Coal Co. (3)	Pultney	Bt-936	D-0216	loading dock, prep plant — jig, flotation, centrifugal dryer, crushers, screens
	Ohio River Collieries, Inc. P.O. Box 128 Bannock, OH 43972 614-968-3504 Tony Gentile, pres.	Lafferty Tipple Lafferty Truck Shop	Union Union	Bt-947 Bt-1093	D-0773 D-0773	tipple shop
	Ohio Valley Coal Co. 56854 Pleasant Ridge Rd. Alledonia, OH 43902 216-765-1240 Robert E. Murray, pres.	Powhatan #6 (4)	Smith, Washington	Bt-68	D-0360	prep plant — jigs, cyclones, centrifuges, thickeners, filters, screens
	Ohio Valley Transloading Co. 56854 Pleasant Ridge Rd. Alledonia, OH 43902 216-765-1240 Robert E. Murray, pres.	Harbour Facility	York	Bt-1198		dock
	Quarto Mining Co. (subsidiary of Consolidation Coal Co.) 1029 Market St. P.O. Box 231 Clarington, OH 43915 614-458-2016 Ben Statler, v. pres.	Central Shop	York	Bt-1000		central shop
	R & F Coal Co. 538 North Main St. Cadiz, OH 43907 614-942-9269 Doug Poush, pres.	Lamira Preparation Plant (1)	Smith	Bt-108	D-0146	prep plant — heavy-media washers, cyclone, centrifuges, thickeners, filters, crushers, breakers, screens
	Rayle River Coal 67705 Friends Church Rd. St. Clairsville, OH 43950 614-695-2197 George Nicolozakes, pres.	Bellaire River Dock Rayle River Terminal	City of Bellaire Pultney	Bt-832 Bt-1191	D-0838	dock coal transfer facility
Carroll	James Bros. Coal Co. 190 S. Main St. P.O. Box 425 Magnolia, OH 44643 216-866-9388 Kermit & Richard James, Jr., partners	James Bros. Tipple	Rose	Cl-17	D-0705	tipple
	T & M Enterprises, Inc. P.O. Box 581 Zoar, OH 44697 216-874-2085 Carol J. Baker, pres.	Sherrodsville Tipple	Orange	Cl-C	D-0707	tipple

**1993 OHIO DIRECTORY OF COAL-PREPARATION PLANTS AND  
ASSOCIATED FACILITIES, BY COUNTY – Continued**

County	Name, address, telephone number, and president/owner/manager of company	Name of plant (and map location number for coal-preparation plants)	Township	State mine number	Division of Reclamation permit number	Type of facility
Columbiana	Buckeye-Industrial Mining Co. P.O. Box 389 Lisbon, OH 44432 216-337-9511 John C. Grisham, pres.	Kensington Preparation Plant (5) Gavers Preparation Plant (29)	West	Ca-879	D-0806	prep plant — heavy-media washer, cyclone, centrifuges, breaker prep plant — Jeffrey jig system
	C & E Coal, Inc. Route 2 Box 177 Toronto, OH 43964 614-537-1498 Amos L. Rawson, pres.	C & E Coal, Inc. (6)	Madison	Ca-892	D-0599	tipple, prep plant — crushers, screens
	State Line Resources, Inc. Route 154 Negley, OH 44441 216-426-2728 Charles H. Muse, Jr., pres.	State Line Resources, Inc. (33)	Middleton	Ca-505	D-0223	prep plant — crushers, cyclones, screens
Coshocton	Conesville Coal Preparation Co. 14561 Twp. Rd. 263 Conesville, OH 43811 614-687-3209 H. D. Leppla, gen. mgr.	Conesville Coal Preparation Co. (7)	Franklin	Cn-810		prep plant — jig, cyclones, froth cells, flotation, filter press, screens, dryers
	Oxford Mining Co. 2313 Cambridge Rd. P.O. Box 427 Coshocton, OH 43812 614-623-0015 Charles C. Ungurean, pres.	Lori Tipple	Franklin	Cn-736	D-0671	tipple
	R & F Coal Co. 538 North Main St. Cadiz, OH 43907 614-942-9250 Doug Poush, pres.	Barb Tipple	Franklin	Cn-748	D-0661	tipple
	Sugarcreek Clay & Limestone Co. P.O. Box 402 Sugarcreek, OH 44681 216-852-4440 Daniel O. Miller, pres.	Sugarcreek Tipple	Crawford	Cn-836	D-0801	tipple
Gallia	Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 614-682-7787 Phil A. Bowman, v. pres.	Waterloo River Dock	Addison	Ga-229	D-0725	dock, tipple
	Mack Energy Co. P.O. Box 148 Union Furnace, OH 43158-0148 614-385-8521 Michael B. McCort, pres.	Mack River Tipple	Clay	Ga-236		dock, tipple
	Sands Hill Coal Co., Inc. 1203 N. Pennsylvania Ave. Wellston, OH 45692 614-384-5659 Jack Huffman, pres.	Sands Hill Coal Co., Inc.	Addison	Ga-183	D-0834	tipple
Guernsey	Thompson Mining Co. 12321 Ideal Rd. Byesville, OH 43723 614-685-6726 George Thompson, pres.	Thompson Mining Co. (34)	Jackson	Gy-320		prep plant — crusher
Harrison	Consolidation Coal Co. Eastern Region Cadiz, OH 43907 614-942-4335 Samuel Shrader, sr. v. pres., mining	Georgetown Preparation Plant (8)	Cadiz	Hn-212	D-0192	prep plant — jigs, flotation, cyclones, centrifuges, filters, crushers, breaker, screens, dryer, picking tables, magnets
	Cravat Coal Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 614-942-4656 Anthony Puskarich, pres.	22 Shop	Moorefield	Hn-230		shop



**1993 OHIO DIRECTORY OF COAL-PREPARATION PLANTS AND  
ASSOCIATED FACILITIES, BY COUNTY — Continued**

County	Name, address, telephone number, and president/owner/manager of company	Name of plant (and map location number for coal-preparation plants)	Township	State mine number	Division of Reclamation permit number	Type of facility
Harrison (con't)	Harrison Processing Corp. 86395 Mine Rd. P.O. Box 250 Hopedale, OH 43976 614-942-8220 John A. McNab, pres.	Nelms Prep Plant (30)	Green	Hn-169	D-0424	prep plant — heavy-media vessel, heavy-media cyclones, spirals, dryers, thickeners, crushers, screens
	R & F Coal Co. 538 North Main St. Cadiz, OH 43907 614-942-9250 Doug Poush, pres.	Machine Shop/Warehouse Cadiz Lab	Cadiz Cadiz	Hn-709 Hn-709C		shop laboratory
Hocking	Mack Energy Co. P.O. Box 148 Union Furnace, OH 43158-0148 614-385-8521 Michael B. McCort, pres.	Mack Energy Tipple	Starr	Hg-M	D-0556	tipple
Jackson	Sands Hill Coal Co., Inc. 1203 N. Pennsylvania Ave. Wellston, OH 45692 614-384-5659 Jack Huffman, pres.	Sands Hill Prep Plant (9)	Milton	Jkn-1055	D-0347	prep plant — heavy-media cyclone, hydrocyclones, screens, dryer, crusher, picking table, magnets
	Stewart Coal Co. Lake Alma Rd. Wellston, OH 45692 614-286-4696 William F. Stewart, pres.	Stewart Tipple	Milton	Jkn-S	D-0659	tipple
	Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 614-682-7787 Phil A. Bowman, v. pres.	Bowman Strip (10)	Jefferson, Madison	Jkn-367	D-0285	prep plant — jig, crushers, breaker, screens, dryers, wash tables
	Rayland Harbor P.O. Box 2388 Wintersville, OH 43952 614-264-7704 George Krulock, pres.	#40 Dock-Shop-Prep Plant (12)	Warren	Jfn-647	D-0492	dock, shop, prep plant — heavy- media washer, cyclones, crushers, breaker, screens, dryers
Jefferson	T & T Coal Co. P.O. Box 116 Steubenville, OH 43952 614-282-2066 Mark Teramana, gen. mgr.	T & T Tipple	Island Creek	Jfn-TT	D-0988	tipple
	W.B. Coal Co., Inc. R.D. 1 Box 40 Bloomingdale, OH 43910 614-282-6503 Wayne Boich, pres.	W.B. Tipple	Cross Creek, Wayne	Jfn-744	D-0665	tipple
	Collins Mining Co. Rte. 2 Box 48 Ironton, OH 45638 614-532-9400 O. C. Collins, owner	River Dock	Hamilton	Le-415	D-0777	dock
Lawrence	Harbour Marine, Inc. P.O. Box 3126 Huntington, WV 25702-0126 703-935-7521 James Williamson, v. pres.	Harbour Marine, Inc.	Union	Le-420	D-0662	tipple
	Ironton Coal Co., Inc. 9431 U.S. Rte. 60 Ashland, KY 41102-9527 606-928-3433 Larry Addington, pres.	Ironton Coal Co., Inc.	Upper	Le-439		loading dock
Mahoning	East Fairfield Coal Co. 10900 South Ave. P.O. Box 217 North Lima, OH 44452-0217 216-549-2165 R. E. Mackall, pres.	Tipple Washing & Crushing Plant (13)	Beaver Beaver	Mg-621 Mg-623	D-0214	tipple prep plant — cyclones, centrifuges, thickener, filter, crushers, screens, magnets

**1993 OHIO DIRECTORY OF COAL-PREPARATION PLANTS AND  
ASSOCIATED FACILITIES, BY COUNTY – Continued**

County	Name, address, telephone number, and president/owner/manager of company	Name of plant (and map location number for coal-preparation plants)	Township	State mine number	Division of Reclamation permit number	Type of facility
Mahoning (con't)	Ted Mesmer & Sons, Inc. 1282 E. South Range Rd. North Lima, OH 44452-9998 216-549-2385 Ted Mesmer, Jr., v. pres.	Mesmer Tipple	Beaver	Mg-59	D-0686	tipple
	Thompson Bros. Mining Co. 3379 E. Garfield Rd. New Springfield, OH 44443 216-549-3979 J. E. Thompson, owner	Thompson Bros. Mining Co.	Springfield	Mg-588	D-0711	tipple
Meigs	Addington, Inc. 9431 U.S. Rte. 60 Ashland, KY 41102-9527 606-928-3433 Michael Quillen, pres.	Addington Dock #4	Salisbury	Ms-285	D-0698	tipple, dock
	Raven Hocking Coal Corp. P.O. Box 108 Mason, WV 25260 304-773-5531 Velma G. Zuspan, pres.	Raven Dock	Sutton	Ms-307		dock
	Southern Ohio Coal Co. P.O. Box 490 Athens, OH 45701 614-286-5051 Jim Tompkins, gen. mgr.	Meigs Mine No. 31 (14)	Salem	Ms-293	D-0354	prep plant — heavy-media washers, flotation, cyclones, centrifuges, thickeners, filters, breaker, screens
Monroe	Quarto Mining Co. (subsidiary of Consolidation Coal Co.) 1029 Market St. Clarington, OH 43915 614-458-2016 Ben Statler, v. pres.	Powhatan #4 (15)	Salem	Me-4	D-0422	prep plant — jigs, cyclones, centrifuges, thickeners, filters, crushers
Morgan	Central Ohio Coal Co. P.O. Box 98 Cumberland, OH 43732 614-962-2013 Gary Dimmerling, gen. mgr.	Muskingum Mine (16)	Meigsville	Ne-41	D-0378, D-0420	tipple, prep plant — jigs, flotation, cyclones, thickener, filters, crushers, breakers, screens, magnets
Muskingum	Sands Mining Corp. 3445 Adamsville Rd. P.O. Box 2848 Zanesville, OH 43701 614-454-1483 Gene Sands, pres.	Sands Coal Washing (28)	Washington	Mum-239	D-0428	prep plant — jig, cyclones, crusher, flotation, conveyor
Noble	Knowlton Industries 61779 Sampson Rd. Cambridge, OH 43725 614-638-2100 W. B. Knowlton, Jr., partner	Knowlton Tipple	Brookfield	Ne-KI		tipple
Perry	Crooksville Coal Co., Inc. P.O. Box 149 Crooksville, OH 43731 614-982-6651 Ralph L. Allen, pres.	Crooksville Preparation Plant (18)	Bearfield	Py-317	D-0248	prep plant — jig, flotation, centrifugal dryer, crushers, screens
		Crooksville Tipple	Salt Creek	Py-339	D-0692	tipple
	Nutter Bros. Coal Co., Inc. P.O. Box 190 New Lexington, OH 43766 614-394-2681 James P. Nutter, pres.	#1 Tipple	Coal	Py-NB	D-0716	tipple
Scioto	Norfolk Southern Railroad 914 Hayport Rd. Wheelersburg, OH 45694 614-574-8491 Charles G. Howard, asst. to mgr.	NS Wheelersburg Terminal	Porter	So-96		dock
Tuscarawas	Central Fuel Co. County Rd. 55 P.O. Box 165 New Philadelphia, OH 44663 216-339-5049 Keith B. Kimble, gen. mgr.	Central Fuel Co. (20)	York	Ts-1938	D-0264	prep plant — jig, screen, dryers

**1993 OHIO DIRECTORY OF COAL-PREPARATION PLANTS AND  
ASSOCIATED FACILITIES, BY COUNTY — Continued**

County	Name, address, telephone number, and president/owner/manager of company	Name of plant (and map location number for coal-preparation plants)	Township	State mine number	Division of Reclamation permit number	Type of facility
Tuscarawas (con't)	Costain Coal, Inc. P.O. Box 729 Gnadenhutzen, OH 44629 614-254-4395 Thomas H. Parker, pres.	Costain Coal, Inc. (19)	Clay, Salem	Ts-115	D-0199	prep plant — jig, flotation, cyclones, filters, crushers, screens
	Horizon Coal Corp. 11415 Erie Ave. SW P.O. Box 618 Beach City, OH 44608 216-756-2414 Merle Mullet, pres.	Horizon Coal Wash Plant (21)	Franklin, Lawrence	Ts-1942	D-0287	prep plant — jigs, cyclones, centrifuges, crushers, screens, picking tables
		Slurry Wash Plant (32)	Franklin, Lawrence	Ts-HC	D-0981	prep plant — cyclones
	Miller Mining, Inc. P.O. Box 525 Sugarcreek, OH 44681 216-852-4511 Olen Miller, pres.	Copperhead Tipple	Sugar Creek, Wayne	Ts-MM	D-0652	tipple
		Barrs Mills Tipple	Sugar Creek	Ts-MM1	D-0876	tipple
Vinton	Addington, Inc. 9431 U.S. Rte. 60 Ashland, KY 41102-9527 606-928-3433 Michael Quillen, pres.	Addington, Inc. (23)	Clinton	Vn-178	D-0185	prep plant — washers, cyclones, jig, centrifugal dryer, thickener, Diester table, screens, filter, crusher, magnet
	Benedict, Inc. P.O. Box 315 McArthur, OH 45651 614-596-5226 W. E. Engle, pres.	Benedict, Inc. (22)	Swan	Vn-145	D-0159	prep plant — heavy-media washer, cyclone, crusher, conveyors
	Daft Coal Co. P.O. Box 93 McArthur, OH 45651 614-596-4127 Lawrence Daft, pres.	Daft Coal Tipple	Madison	Vn-D		tipple
	Sands Hill Coal Co., Inc. 1203 N. Pennsylvania Ave. Wellston, OH 45692 614-384-5659 Jack Huffman, pres.	Sands Hill Strip (24)	Clinton	Vn-641	D-0309, D-0169	tipple, prep plant — heavy-media washers, flotation, cyclones, centrifuge, crushers, screens, dryer, picking tables, magnets
Wayne	Holmes Limestone Co. P.O. Box 295 Berlin, OH 44610 216-893-2721 Merle Mullet, pres.	Holmes Limestone Preparation Plant (27)	Franklin	Hs-79	D-0283	prep plant — jig, crushers, dryers, screens, conveyors





View from the drift opening of the Big Five Coal Company mine in Richland Township, Belmont County, looking toward its tipple. *Circa 1911.* Photo courtesy of The Ohio Historical Society, Jeffrey Mining Equipment collection.

## 1993 OHIO DIRECTORY OF PRODUCING COAL-MINE OPERATORS, BY COUNTY

NOTE: This directory lists only the coal-producing operations. It does not list tipplers, loading docks, preparation plants, or other active, nonproducing operations that would contribute to employment and wage statistics presented in tables 10-16. For those mines for which the Division of Mines has not assigned a state mine number, a letter designation is used (example: Bt-C). There is no correlation between the "Seam Number" column and the "Production Tonnage" column. The Seam Number column represents the seams mined at the operation. No production tonnage is listed by seam.

## SEAM IDENTIFICATION

Name of company	Name of mine	Township	Seam		Type of mine	Production		Days in production in 1993	Disposition		Employment			State mine number
			Number	Thick-ness (inches)		Method	Tonnage		Method	Tonnage	Production			
											Under-ground	Sur-face	Non-produc-tion	
BELMONT COUNTY – Total production = 5,904,179 tons														
Barnock Coal Co. B. L. Black, Inc. Cravat Coal Co.	Simon Black 2	Colerain	12	60	surface	strip	6,153	32	truck	6,153		<1	1	Bt-1189
	Rice Pit	Wheeling	8	48	surface	strip	24,125	140	truck	24,125		3	2	Bt-B
	Fairpoint Pit	Washington	8		surface	strip	65,034	149	water	65,034		15	<1	Bt-1201
	Stewart/Saffell Pit	Richland	8		surface	strip	17,439	89	truck	17,439		6	1	Bt-1202
		York	8,9		surface	strip	42,472	203	water	22,076		5	1	Bt-C
						auger	1,132		truck	21,528				
						Total	43,604		Total	43,604				
Fairpoint Coal Co. Joyce Coal Co., Inc.	Pogue Run	Richland	8	60	surface	strip	24,203	3	truck	24,203		6	2	Bt-927
	Crescent Pit	Richland	8		surface	strip	17,141	49	truck	17,141		1		Bt-1184
	Susie Mine	Wheeling	9	32	surface	strip	66,016	161	truck	71,220		6		Bt-1179
K.C.C.I.			8	52	surface	auger	5,204							
						Total	71,220							
Marietta Coal Co.	AT&T	Kirkwood, Union	8		surface	strip	94,639	144	truck	127,895		21	24	Bt-AT <sup>1</sup>
						auger	33,256							
						Total	127,895							
	Vannest-Moore et al.	Richland	11		surface	strip	59,167	86	truck	72,536				Bt-771
						auger	13,369							
						Total	72,536							
	Barack-Henthorne et al.	Richland	11	36	surface	strip	118,639	138	truck	150,858				Bt-1104
						auger	32,219							
						Total	150,858							
Oliver-Clark et al. Porterfield-Harrison Leasing		Richland	11		surface	strip	3,938	12	truck	3,938				Bt-1129
		Richland	11		surface	strip	115,851	163	truck	162,437				Bt-1183
						auger	46,586							
						Total	162,437							
	Borovich-Neitzelt et al.	Smith	12		surface	strip	290	2	truck	571				Bt-147
						auger	281							
						Total	571							
Denham-Albaugh et al.		Smith	11	44	surface	strip	28,554	47	truck	44,583				Bt-1164
						auger	16,029							
						Total	44,583							

Ohio River Collieries, Inc. Ohio Valley Coal Co.	7400 Pit Powhatan #6	Union Smith, Washington	9 8	48 62	surface slope	strip longwall cont. miner Total	1,656 3,075,487 892,614 3,968,101	138 298	truck rail truck Total	1,656 3,517,030 583,983 4,101,013	195	1	<1 184	Bt-1074 Bt-68
R & F Coal Co.	Miklovic	Flushing	9	35 25	surface	strip auger Total	192,012 2,112 194,124	248	water truck Total	62,834 129,948 192,782		19	2	Bt-M
Meigs-Phillips	Watson-Huhn	Goshen, Wayne	9 11	42	surface	strip auger Total	93,724 1,842 95,566	114	truck	95,566		10	1	Bt-1168
Frank Widmor Coal Co.	Dudek-Bannock	Warren	8 9	42	surface	strip auger Total	22,195 7,319 29,514	220	water truck Total	9,100 20,517 29,617		2	<1	Gy-304 <sup>2</sup>
Frank Widmor Coal Co.	Wheeler	Pultney	8 9	72 46	surface	strip auger Total	746,084 5,680 751,764	291	water truck Total	233,493 519,155 752,648		63	9	Bt-1188
Frank Widmor Coal Co.	Myers/Whit	Rose	8 9	36	surface	strip auger Total	31,717	258	truck	31,717		2	1	Bt-1190
Buckeye-Industrial Mining Co.	James Bros. Coal Co. Myers Mining	Rose	5,6	36	surface	strip auger Total	26,673	252	truck	26,673		9	1	Cl-238
Regal Mining, Inc. Valley Mining, Inc.	Harlem Mine #2	Rose Lee	6A H	22 24	surface	strip auger Total	2,449 3,483 40	7	truck truck	4,300 3,523		2 1	9 <1	Cl-162 Cl-249
Blum Coal Co. Buckeye-Industrial Mining Co.	Harlem Mine #3 Harlem Mine #4 Walters Dellroy	Lee Lee Perry Monroe	H H H 7	24 20 16 36	surface	strip auger Total	31,040 2,727 22,538 18,622	307 77 76 127	truck truck truck truck	31,040 2,727 22,538 18,622		3 4 4 3	1 1 4 2	Cl-HM Cl-HM1 Cl-W Cl-819
C & E Coal, Inc.	West Point West Point #5 Mountain Spring Coal Co. #6 West Point #8 Mine Perrino	Center, Wayne Franklin Madison Madison Wayne West Wayne	6 7A 7,7A 7 6A 7 6	25 36 35 44 40	surface surface drift drift surface	strip strip cont. miner cont. miner strip auger Total	2,804 133,203 164,581 84,051 336,790 69,931 98,499 19,873 118,372	10 264 264 136 256 66 122	truck truck truck truck truck truck	2,804 133,203 164,581 84,051 336,790 69,931 118,372		<1 10 15 22 31 8	3 1 1 2 6 1	Ca-950 Ca-BI Ca-987 Ca-991 Ca-978 Ca-509 Ca-986
Commercial Minerals, Inc. Lisbon	Ketchum East Lisbon	Center, Wayne Elk Run	7 7	24 20	surface surface	strip strip auger Total	25,299 53,041 1,850 54,891	133 220	truck truck	25,299 54,891		3 6	<1 3	Ca-CM Ca-951
D. & D. Mining Co.	Black Road	Madison	7	24	surface	strip auger Total	1,166 2,055 3,221	89	truck	3,221		1		Ca-981
Saviers Mine	Unity	Unity	4 5	30 10	surface	strip auger Total	85,074 665 85,739	260	truck	85,739		6	8	Ca-348

## CARROLL COUNTY — Total production = 107,572 tons

## COLUMBIANA COUNTY — Total production = 1,131,047 tons

<sup>1</sup>Employment reported for Bt-AT is a summary for all Marietta Coal Co. operations.  
<sup>2</sup>See also Guernsey County.

AUG 07 1995



## 1993 OHIO DIRECTORY OF PRODUCING COAL-MINE OPERATORS, BY COUNTY — Continued

Name of company	Name of mine	Township	Seam		Type of mine	Production		Days in production in 1993	Disposition		Employment			State mine number
			Number	Thick-ness (inches)		Method	Tonnage		Method	Tonnage	Production			
											Under-ground	Sur-face		
COLUMBIANA COUNTY (continued)														
Double "R" Mining East Fairfield Coal Co.	Burt Strip Gavers Mine	Fairfield Center, Wayne	6	20	surface	strip	5,344	76	truck	5,344	5	2	Ca-985	
			7	36	surface	auger	18,709	101	truck	41,565	3	1	Ca-984	
John Glenn Mining Co.	Bailey Mine	Hanover	7A,W		surface	Total	38,579	125	truck	8,242	3	1	Ca-JG	
					surface	strip	8,242							
COSHOCTON COUNTY – Total production = 1,347,597 tons														
Oxford Mining Co.	Tri-Mac Shurtz	Franklin, Jackson Lafayette	6		surface	strip	28,779	50	truck	28,779	2	3	Cn-831	
			6		surface	strip	242,097	250	truck	272,560	15	3	Cn-OX	
R & F Coal Co.	Taylor	Lafayette	5	30	surface	auger	30,463							
			6	30	surface	Total	272,560	66	water truck	2,614	1	<1	Cn-820	
	Bartolec South-Cartwright	Oxford	5	30	surface	strip	9,863		Total	10,400				
			6	30	surface	auger	28,779	290	water truck	40,680	10	1	Cn-768	
	Bartolec North-Adjacent	Oxford	5	30	surface	strip	242,097		Total	100,356				
			6	30	surface	auger	34,789	93	water truck	141,036	1	2	Cn-779	
	Bartolec II	Oxford	5	30	surface	strip	143,335		Total	3,559				
			6	30	surface	auger	9,792	69	water truck	10,426	1	1	Cn-P	
	Porcher Area	Oxford	5	30	surface	Total	13,564		Total	13,985				
			6	22	surface	strip	8,159	150	water truck	2,946	8	1	Cn-PA	
	Wolf-Isleta	Oxford	5	30	surface	strip	99,741		Total	36,456				
			6	30	surface	auger	612,975	291	water truck	69,451	53	7	Cn-RF	
	Isleta Central	Oxford	5,6		surface	Total	2,839		Total	425,109				
					surface	strip	615,814	49	water truck	613,238	1	1	Cn-RF1	
	Pollock	Oxford	5,6		surface	strip	2,584		Total	933				
					surface	auger	1,787	269	water truck	1,787	8	1	Cn-RF2	
R & R Minerals, Inc.	Maynard Adams	Adams Keene	6	30	surface	strip	107,664		Total	43,175				
			5	24	surface	auger	12,669	29	truck	83,642	2	2	Cn-RR1	
Sugarcreek Clay & Limestone, Inc.	Fresno Sugarcreek Clay & Limestone, Inc.	White Eyes Keene	6	30	surface	strip	120,333		Total	23,508				
			5	30	surface	strip	4,546	130	truck	23,508	2	2	Cn-RR	
GUERNSEY COUNTY – Total production = 402,250 tons														
C L A Coal, Inc. Costain Coal, Inc.	Berresford Anco Mining, Inc.	Londonderry Monroe	8	60	surface	strip	767	17	truck	767	4	1	Cn-RR2	
			7	26	surface	strip	4,044	90	truck	4,044	1	<1	Cn-839	
					surface	auger	27,385	47	truck	27,385	1	1	Cy-C	
					surface	Total	64,139	259	truck	65,153	12	3	Cy-310	
							1,014							
							65,153							

Northshore Coal, Inc. R & F Coal Co.	Buckeyeville #7 Watson-Huhn	Jackson Millwood	7 8,9	66	surface surface	strip strip auger Total	46,018 73,734 17,116 90,850	279 244	truck water truck Total	46,018 26,029 66,598 92,627	6 7	1	Gy-315 Gy-304 <sup>3</sup>
R. T. G., Inc.	R. T. G. #7 R. T. G. #8 R. T. G. #6 Snyder-Bush	Center Center Spencer Wheeling	7 7 A 6	66 54 24 27	surface surface surface surface	strip strip strip strip auger Total	99,083 30,261 3,525 20,060 19,915 39,975	140 100 10 102	truck truck truck truck	99,083 30,261 3,525 39,975	14 3 1 13	3 1 1 1	Gy-313 Gy-319 Gy-R1G Gy-318
<b>HARRISON COUNTY — Total production = 2,447,095 tons</b>													
Consolidation Coal Co.	Mahoning Valley #36	Athens	8	48	surface	strip auger Total	361,003 6,400 367,403	88	truck	367,403	51	14	Hn-700
Cravat Coal Co.	Hopedale Pit	Green	8		surface	strip	21,934	112	water truck Total	7,915 14,019 21,934	1	1	Hn-228
Harrison Mining Corp.	Nelms Mine #2	Green	6A	60	slope	cont. miner	1,175,173	352	rail water truck Total	51,959 515,634 596,456 1,164,049		13	Hn-710
Jack Martin Mesa Coal Corp. R & F Coal Co.	Martin Mine Conway Sally Buffalo	Green Monroe Cadiz	8 7 9	60 45	surface surface surface	strip strip strip auger Total	1,714 15,701 9,385 1,649 11,034	10 20 58	truck truck water truck Total	1,714 15,701 3,064 7,848 10,912	1 2 1	<1 1 <1	Hn-755 Hn-751 Hn-753
	Harrah West	Green	8 8A	56 12	surface	auger	22,975	64	water truck Total	7,720 14,787 22,507	3	2	Hn-748
	Myers North	Short Creek	8 8A	50 13	surface	strip	58,219	153	water truck Total	15,470 43,512 58,982	4	2	Hn-MN
	Branson Ridge	Short Creek	8		surface	strip	435,994	222	water truck Total	140,289 295,445 435,734	31	4	Hn-754
Valley Mining, Inc.	Smith	Cadiz	8 8A	55 20	surface	strip auger Total	138,569 66,659 205,228	260	truck	205,228	17	3	Hn-750
Varkony Mining Co. W.B. Coal Co., Inc.	Varkony Mining Co. McGinness Bros. Strip McGinness Bros. #3	Green German Green	8 H 8,8A	20	surface surface surface	strip strip strip auger Total	74,736 22,089 31,426 3,469 34,895	256 17 22	truck truck truck	74,736 22,089 34,897	9 2 10	<1 1	Hn-217 Hn-738 Hn-756
<b>HOLMES COUNTY — Total production = 153,635 tons</b>													
Holmes Limestone Co.	557 Charm	Clark Clark, Walnut Creek	6 5 6	30 30 30	surface surface	strip strip	68,010 40,753	278 128	truck truck	68,010 40,753	5 3	1 1	Hs-97 Hs-86
Miller Mining, Inc.	241 Plant Beachy Wasteland Management	Hardy Walnut Creek Walnut Creek	4 5,6 5,6	24	surface surface surface	strip strip strip	17,355 26,008 1,509	274 118 10	truck truck truck	17,355 26,008 1,509	6 1 5	1 1 1	Hs-67 Hs-M Hs-MMI

<sup>3</sup>See also Belmont County.

## 1993 OHIO DIRECTORY OF PRODUCING COAL-MINE OPERATORS, BY COUNTY - Continued

Name of company	Name of mine	Township	Seam		Type of mine	Production		Days in production in 1993	Disposition		Employment		State mine number	
			Number	Thick-ness (inches)		Method	Tonnage		Method	Tonnage	Production Under-ground	Non-produc-tion		
JACKSON COUNTY – Total production = 1,250,717 tons	Cedar Heights Clay Co. R. A. Eberts Co.	Jefferson Madison Milton	5	24	surface	strip	470	10	truck	470	1	1	Jkn-CH	
			5	24	surface	strip	5,310	20	truck	5,310	1	1	Jkn-1007	
			3	24	surface	strip	106,562	111	truck	96,044	6	1	Vn-1924	
			4	12										
			5	30										
	Sands Hill Coal Co., Inc.	Coal	2		surface	strip	13,276	60	water truck	4,216	22	1	Jkn-SHC5	
						Total		9,060						
		Coal								13,276				
			2	30	surface	strip	7,075	10	water truck	5,610	22	1	Jkn-1066	
										1,465				
Stewart Coal Co. Waterloo Coal Co., Inc.	Sands Hill Strip #5	Milton	4A	34	surface	strip	409,454	250	water truck	217,891			Jkn-1069	
			5	23						191,563				
			6	16						409,454				
	Hiram West	Milton	6A	16										
			4A	18	surface	strip	5,400	10	water truck	2,255	17	1	Jkn-1071	
										3,145				
	Sands Hill Strip #4	Milton								5,400				
			4A	36	surface	strip	97,457	152	water truck	79,658			Jkn-SH4	
			5	50						17,799				
			W	10						97,457				
Dark Hollow Bowman Strip	Jackson Bloomfield, Madison	4A	48	surface	strip	118,042	263	truck	118,042	17	1	Jkn-1070		
		4A	34	surface	strip	487,671	292	truck	521,041	27	37	Jkn-367		
		5												
		6												
JEFFERSON COUNTY – Total production = 1,673,447 tons	American Industries & Resources Corp. Anthony Mining Co., Inc. Boch Mining Co.	Island Creek	8	48	surface	strip	15,672	59	truck	15,672	2	1	Jfn-532	
			8	40	surface	strip	16,210	61	truck	16,210	2	1	Jfn-788	
			8	54	surface	strip	352,217	223	truck	352,217	36	17	Jfn-528	
			8A	12										
			7,7A	35	surface	strip	15,973	360	truck	15,973	1	1	Jfn-1286	
	Buckeye-Industrial Mining Co. D & L Contractors, Inc.	Smithfield	8	56	surface	strip	913	2	truck	913	1	<1	Jfn-780	
			8A	18										
			8	54	surface	strip	24,783	45	truck	24,783	5	2	Jfn-829	
			8A	20										
			8	54	surface	strip	37,977	60	truck	37,977	3		Jfn-784	
F. & M. Coal Co. Joyce Coal Co., Inc.	Wayne Warren	8		surface	strip	54,166	111	truck	65,924	7		Jfn-821		
		8		auger		11,758								
Penn Eagle Coal Corp.	B & S Mine Salt Run Mine	Saline Wells			Total			65,924						
			6	25	surface	strip	8,884	60	truck	9,136	2	1	Jfn-PE	
			8	55	surface	strip	1,072	4	truck	1,859	1	1	Jfn-831	
					Total									



R & F Coal Co.	Tasa	Smithfield	8 8A	59 26	surface	strip	23,351	69	water truck	6,033 17,971	2	<1	Hn-225
	Friendship Park	Smithfield, Wayne	8 8A 9		surface	strip auger Total	232,894 38,825 271,719	292	water truck	84,056 193,997 278,053	19	3	Jfn-824
	Arrowhead Adjacent	Wayne	8	50	surface	auger	7,145	15	water truck	1,846 5,499	1		Jfn-817
	Friendship II/Jeffco	Wayne	8		surface	strip auger Total	28,856 12,786 41,642	74	water truck	12,522 23,984 36,506	3	<1	Jfn-J
S. & D. Construction Corp.	New Somerset Mine	Knox, Saline	8 8A	40	surface	strip auger Total	96,698 3,216 99,914	247	truck	99,914	13	3	Jfn-SD
	Sterling Mining Co. Valley Mining, Inc.	Brush Creek Smithfield	7 8	36 55	drift surface	cont. miner strip auger Total	261,792 2,284 165 2,449	222 20	truck truck	261,792 2,449	6	5 1	Jfn-823 Jfn-VM
	Greentown	Smithfield	8 8A	60 18	surface	strip	23,901	62	truck	23,901	13	1	Jfn-807
	York	Smithfield	8 8A	60 22	surface	strip auger Total	186,198 4,401 190,599	262	truck	190,599	19	3	Jfn-813
W B. Coal Co., Inc. Weirton Construction Co.	Piergallini	Smithfield	8 8A	55 22	surface	strip	22,534	126	truck	22,534	5	1	Jfn-831
	McGinness Bros. Strip #19	Salem Wells	8 H 8	18 54	surface surface	strip strip auger Total	79,281 26,712 81,996 108,708	62 256	truck truck	79,281 105,998	13 11	2 1	Jfn-815 Jfn-687
	LAWRENCE COUNTY — Total production = 9,611 tons												
	Belville Mining Co., Inc.	Washington	4A	17	surface	strip	9,611	237	truck	14,014	8	3	Le-B
Solomon's Mines, Inc. Thompson Bros. Mining Co.	MAHONING COUNTY — Total production = 4,837 tons												
	Solomon's Mines, Inc. Peres Mine	Green Beaver	3 4	30	surface surface	strip strip	1,975 2,862	10 35	truck truck	1,975 2,862	4 <1	1	Mg-632 Mg-65
	MEIGS COUNTY — Total production = 2,895,853 tons												
	Southern Ohio Coal Co.	Columbia	4A	57	shaft	longwall cont. miner Total	1,770,294 272,299 2,042,593	252	conveyor	2,032,046	220	100	Ms-294
Quarto Mining Co. (subsidiary of Consolidation Coal Co.)	Meigs Mine #31	Salem	4A	57	shaft	longwall cont. miner Total	683,015 170,245 853,260	65	conveyor	856,090	101	126	Ms-293 <sup>4</sup>
	MONROE COUNTY — Total production = 827,377 tons												
	Powhatan #4	Salem	8	60	shaft	longwall cont. miner Total	765,987 61,390 827,377	74	water	825,671	66	100	Me-4

<sup>4</sup>See also Vinton County.  
<sup>5</sup>Employment reported for Jkn-SHC is a summary for all Sands Hill Coal Co., Inc. operations.

<sup>4</sup>See also Vinton County.

<sup>5</sup>Employment reported for Jkn-SHC is a summary for all Sands Hill Coal Co., Inc. operations.

## 1993 OHIO DIRECTORY OF PRODUCING COAL-MINE OPERATORS, BY COUNTY — Continued

Name of company	Name of mine	Township	Seam		Type of mine	Production		Days in production in 1993	Disposition		Employment		State mine number
			Number	Thick-ness (inches)		Method	Tonnage		Method	Tonnage	Under-ground	Production	
MORGAN COUNTY – Total production = 46,549 tons	Central Ohio Coal Co.	Meigs-ville, Bristol, Manchester	9	38	surface	strip	46,549	4	conveyor	46,529	2	5	Ne-41 <sup>6</sup>
	MUSKINGUM COUNTY – Total production = 2,350,330 tons												
Central Ohio Coal Co.	Muskingum Mine	Meigs	9	45	surface	strip	2,206,429	206	conveyor	2,322,456	127	306	Ne-41 <sup>7</sup>
						auger	106,950						
			Total	2,313,379									
King Quarries, Inc. Oxford Mining Co.	King Quarries, Inc. Adamsville	Washington Madison	7 6	surface surface	strip	389	5 100	truck truck	389 35,855	1 2	1 2	<1	Mum-K Mum-O
					strip	33,323							
			auger	2,532									
	Waters	Monroe	6		surface	Total	35,855	10	truck	707	<1	2	Mum-901
						auger	707						
B & N Coal, Inc.	Shevlin Lee Ullman Shilling Jefferson Arnold Pourhouse Muskingum Mine	Elk Elk Jefferson Jefferson Jefferson Marion, Stock Brookfield, Noble, Sharon	9 9 9 9 9 9 9	30 30 30 30 30 36 38	surface surface surface surface surface surface	strip	36,704	256 256	truck truck	36,704 101,557	3 7	1 1	Ne-150 Ne-155
						strip	101,557						
	Central Ohio Coal Co.						strip	124,199	256	truck	124,199	10	1
						strip	108,946	237	truck	108,946	8	1	Ne-1008
						strip	80,926	256	truck	80,926	7	1	Ne-156
						strip	376,433	256	truck	376,433	20	1	Ne-154
						strip	214,376	21	conveyor	227,769	12	30	Ne-41 <sup>8</sup>
						auger	11,625						
	Total						226,001						
King Quarries, Inc.	Nau	Buffalo	7	30	surface	strip	11,089	67	truck	11,089	2		Ne-152
PERRY COUNTY – Total production = 395,321 tons	Avis Coal Co.	Monroe, Pleasant, Salt Lick	6	120	surface	strip	181,106	201	truck	235,287	20	1	Py-A
						auger	54,181						
			Total				235,287						
Buckingham Mining & Reclamation, Inc.	Bristol Mine Hazelton Mine	Pike Salt Lick	6 5	40 30	surface surface	strip	26,134	91 106	truck truck	26,134 14,623	2 1	3 2	Py-BMR Py-BM
						strip	14,623						
		Roger's Hollow	Salt Lick	6	40	surface	strip	7,509	102	truck	23,533	2	3
						auger	16,024						
						Total	23,533						
Crooksville Coal Co., Inc. Dennis Clay Co. J. C. Coal Co., Inc.	Crooksville Strip County Rd. 7 Mine Rendville Strip	Bearfield Monday Creek Monroe, Pleasant	6 6 6	30 18 60	surface surface surface	strip	87,481	254 1 47	truck truck truck	87,481 359 7,904	11 1 1	3 1 1	Py-317 Py-338 Py-JC
						strip	359						
			strip	7,904									
STARK COUNTY – Total production = 230,340 tons	American Landfill, Inc.	Sandy	5 6	24 24	surface surface	strip	24,111	35	truck	24,111	6	1	Sk-246
						strip							
	Buckeye-Industrial Mining Co. ENZ, Inc. Holmes Limestone Co.	Cable Robertsville Creighton Pit Bolivar Mine Charm-Grove	Osnaburg Paris Sandy Bethlehem Sugarcreek	5,6 6,6A 4 5,5A 3A	30 35 24	surface surface surface surface surface	strip strip strip strip strip	96,280 1,198 87,018 16,807 4,926	252 81 306 266 26	truck truck truck truck truck	96,280 1,198 87,018 25,937 4,926	8 1 9 3 2	1 1 1 1 1

<sup>6</sup>See also Muskingum and Noble Counties.



## 1993 OHIO DIRECTORY OF PRODUCING COAL-MINE OPERATORS, BY COUNTY — Continued

Name of company	Name of mine	Township	Seam		Type of mine	Production		Days in production in 1993	Disposition		Employment			State mine number
			Number	Thick-ness (inches)		Method	Tonnage		Method	Tonnage	Under-ground	Sur-face	Non-produc-tion	
TUSCARAWAS COUNTY (continued)														
Miller Mining, Inc.	General Clay et al.	Auburn, Bucks	5,6		surface	strip	378,659	256	rail truck	38,909		31	1	Ts-GC
	Mizer	Auburn, Jefferson, York	5,6		surface	strip auger	19,176 893	260	truck	290,007 328,916		4	2	Ts-2027
R & F Coal Co.	Wilmar Farms	Dover	3A,4		surface	strip	29,606	106	truck	29,606		4	1	Ts-M1
	Mast-Miller et al.	Sugar Creek	5,6		surface	strip	84,456	256	truck	84,456		12	1	Ts-2010
	Swihart	Sugar Creek	3A,4		surface	strip	1,983	25	truck	1,983		1		Ts-WS
	Spooky Hollow	Sugar Creek	3A,4,6	26	surface	strip	10,216	139	truck	10,216		2	1	Ts-2035
	DeLong-Wilsterman	Mill	7		surface	strip auger	39,258 2,297	113	truck	41,555		4	1	Ts-DW
Sugarcreek Clay & Limestone, Inc. Toronto A & L Coal, Inc.	Hamlin-Harding et al.	Rush	7		surface	Total	41,555	24	water truck	1,346 2,579		4	1	Ts-2043
	Ladrach-Lang	Bucks	6		surface	strip auger	3,568 438		Total	3,925				Ts-2042
	James Tunnel Hill	Sandy	6	44	surface	strip	40,905	180	truck	40,905		2		Ts-2040
			6		surface	strip auger	8,289 418	21	truck	8,707		4	1	
						Total	8,707							
Valley Mining, Inc.	Lattavo Gibson	Mill Salem	7 6 7	42 42 18	surface surface	strip strip auger	64 859 1,095	2 6	truck truck	64 1,954		<1 <1	3 2	Ts-2011 Ts-2014
	Taylor	Salem	6	36	surface	Total	1,954 43,009 8,869	122	truck	51,878		3	1	Ts-2034
Zoar Mining Co.	Zoar Mining Co.	Sandy	4		surface	strip auger	51,878 2,104	10	truck	1,462		1	1	Ts-540
Addington, Inc.						Total								
	Dundas Job	Clinton	4 5 6 7	24 24 24	surface	strip	1,006,868	305	truck	1,006,868		91	10	Vn-191
Benedict, Inc.	Waldron Pit Allied West	Clinton Elk	4, W W 4A 5	32 36 24 24	surface surface	strip strip	103,649 103,648	200 200	truck truck	103,649 103,648		6 6	1 1	Vn-183 Vn-184
	Austin Pit	Elk	W 4A 5 6	24 24 15 30	surface	strip	103,649	200	truck	103,649		6	1	Vn-187
R. A. Eberts Co., Inc.	Mitchell Hollow B. & D. Pit	Swan Clinton	5 3 4 5 6	24 24 12	surface surface	strip strip	103,648 106,562	200 111	truck truck	103,648 96,047		6 6	1 1	Vn-172 Vn-192 <sup>a</sup>
	Green Pit	Madison	2 3 4 5	18 12 12	surface	strip	178,663	179	truck	157,109		16	5	Vn-182

Elk Coal, Inc. Sands Hill Coal Co., Inc.	Elk Strip Sands Hill Strip #3	Elk Clinton	4 W 4A 5 6 6A W 4A 5 6 4A	24 33 24 20 14 10 36 50 16 57	surface surface	strip strip	35,857 257,197	257 302	truck water truck Total	35,857 205,357 51,840 257,197	7 25	2 46	Vn-194 Vn-S
	Sands Hill Strip #4	Clinton			surface	strip	97,456	151	water truck Total	79,658 17,798 97,456	22		Jkn-SH <sup>9</sup>
Southern Ohio Coal Co.	Meigs Mine #31	Wilkesville			drift	longwall cont. miner Total	683,015 170,243 853,258	65	conveyor	856,087	101	126	Ms-293 <sup>10</sup>
<b>WAYNE COUNTY – Total production = 3,169 tons</b>													
Rash Energy, Inc.	Rash Energy, Inc.	Paint	6		surface	strip	3,169	10	truck	3,169	1	1	We-R

<sup>9</sup>See also Jackson County.<sup>10</sup>See also Meigs County.

For those mines for which the Division of Mines has not assigned a state mine number, a letter designation is used (example: Le-A).  
If there are no sales or production figures given for an operation, that operation reported no sales or production in 1993.

[illegible]



## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS – Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
American Aggregates Corp. (con't)	East Liberty #226 (49) Troy Gravel #433 (219) Piqua Gravel #430 (216) Tipp City Gravel #435 (220) Phillipsburg Limestone #421 (70) Dayton Limestone #420 (71) Huber Heights Limestone #432 (143) Rip Rap Road #416 (224) Circleville #216 (251) American Aggregates Corp. (603) American Aggregates Corp. (571) Franklin #714 (349)	Logan Miami Miami Miami Montgomery Montgomery Montgomery Montgomery Pickaway Pickaway Preble Warren	limestone sand & gravel sand & gravel sand & gravel limestone limestone limestone sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel	144,126 387,753   586,157 145,366 68,414 439,249 249,685  365,857	180,707 402,212   581,536 25,179 179,766 338,992 233,876  358,600	Lgn-1 Mi-3 Mi-6 Mi-8 My-1 My-23 My-32 My-66 Pky-1 Pky-AAC Pre-AAC Wan-38	IM-574 IM-462, IM-658 IM-356 IM-355 IM-374 IM-368 IM-1012 IM-677 IM-409, IM-428 IM-1204 IM-779 IM-615
American Landfill, Inc. 1 American Way Warren, OH 44484 216-856-8800 Scott Porter, pres.	American Landfill, Inc. (123) (123)	Stark	clay shale	297,970 87,897	297,970 87,897	Sk-246	IM-1114
American Olean Tile Co., Inc. Lewisport, KY 42351 502-295-3411 Hervy Howell, mgr.	Jefferys (24)	Lawrence	clay			Le-440	IM-828
American Sand & Gravel 8188 Wales Rd. NW North Canton, OH 44720 216-494-6455 Christopher Scala, pres.	American Sand & Gravel (387) American Sand & Gravel (386) American Sand & Gravel (455)	Portage Stark Stark	sand & gravel sand & gravel sand & gravel	725 6,400 663,600	725 6,400 663,600	Pe-ASG Sk-203 Sk-243	IM-212 IM-654 IM-908
Apache Aggregate & Paving Co. 46626 County Rte. 495 Coshocton, OH 43812 614-622-5904 Charlene Ross, pres.	Apache Aggregate & Paving Co. (69) Apache Aggregate & Paving Co. (70)	Coshocton Coshocton	sand & gravel sand & gravel	500 94,588	500 76,574	Cn-718 Cn-783	IM-227 IM-717
Ashcraft Sand & Gravel, Inc. 5850 Dry Fork Rd. Cleveland, OH 45002 513-367-2177 Rick Ashcraft, v. pres.	Ashcraft Sand & Gravel, Inc. (120)	Hamilton	sand & gravel	62,159	62,159	Hmn-54	IM-710
Athens Hocking Reclamation Center 35380 Hocking Dr. P.O. Box 946 Logan, OH 43138 614-385-6019 Edward F. Kilbarger, pres.	Athens Hocking Reclamation Center (81)	Athens	clay	945	945	As-594	
Atlas Towing Co. P.O. Box 1632 Parkersburg, WV 26101 304-428-0341 Christopher V. Criss, pres.	Belpre Bank Run (432)	Washington	sand & gravel	10,743	10,743	Wn-54	IM-383
Aurora Sand & Gravel, Inc. 60 Treat Rd. Aurora, OH 44202 216-641-0300 Gary Helf, pres.	Aurora Sand & Gravel, Inc. (260)	Portage	sand & gravel	290,508	364,567	Pe-84	IM-868
Ayers Limestone Quarry, Inc. 2000 Colerain Pike P.O. Box 67 Martins Ferry, OH 43935 614-633-2958 Thomas E. Ayers, pres.	Ayers Limestone Quarry, Inc. (12)	Belmont	limestone	84,963	84,963	Bt-716	IM-1
B & D Paving Co. P.O. Box 463 Powhatan Point, OH 43942 304-233-6505 Suzanne Hendershot, pres.	B & D Paving Co. (424)	Monroe	sand & gravel	14,673	14,673	Me-508	IM-1000
B-M Machine Co. 12264 Princeton Rd. Huntsburg, OH 44046 216-635-9151 Robert Zalar, owner	B-M Machine Co. (442)	Geauga	sand & gravel			Gea-39	IM-974

## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS — Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
B & N Coal, Inc. P.O. Box 100 Dexter City, OH 45727 614-783-3575 Gilbert Baker, pres.	B & N Coal, Inc. (179)	Noble	limestone			Ne-B	IM-897
Baker Sand, Inc. 7800 White Rd. Burbank, OH 44214 216-948-1448 John E. Baker, pres.	Baker Sand, Inc. (203)	Medina	sand & gravel	583,180	583,180	Ma-20	IM-448
Barrett Paving Materials, Inc. Midwest Division — South 7374 Main St. Cincinnati, OH 45244 513-271-6200 Xavier Lepercq, pres.	Perintown (59)	Clermont	sand & gravel			Ct-9	IM-526
Barrett Paving Materials, Inc. Midwest Division — North 727 E. Ash St. P.O. Box 1458 Piqua, OH 45356 513-773-1933 Chris Ziehler, dist. mgr.	Fairborn #141 Gregory Quarry (66) Barrett Paving Materials, Inc. (177)	Clark Miami Miami	sand & gravel limestone limestone	174,039 226,853	174,039 226,853	Ck-28 Mi-502 Mi-BPM	IM-1100 IM-414 IM-1169
Beaver Excavating, Inc. P.O. Box 6059 Canton, OH 44706 216-478-2151 W. M. Sterling, pres.	Beaver Excavating, Inc. (607) (162)	Stark	sand & gravel clay	80,000	80,000	Sk-BE	IM-1202
Beck Sand & Gravel, Inc. 2820 Webb Rd. Ravenna, OH 44266 216-626-3863 Robert E. Wenrich, pres.	Beck Sand & Gravel, Inc. (256)	Portage	sand & gravel	188,493	188,493	Pe-50	IM-96
Becky Lane Trucking, Inc. 441 Iowa St. Ashland, KY 41101 606-325-8301 Janet Griffiths, pres.	B & L Sand (167)	Lawrence	sand & gravel	34,335	34,335	Le-430	IM-844
Paul D. Beery Trucking Co. 4770 Cincinnati-Zanesville Rd. NE Lancaster, OH 43130 614-653-5061 Paul D. Beery, pres.	Paul D. Beery Trucking Co. (401)	Fairfield	sand & gravel	8,231	600	Fd-14	IM-933
Belden Brick Co. P.O. Box 20910 Canton, OH 44701 216-852-2424 William H. Belden, Jr., pres.	Moomaw Pit (187) (62) (56) (56)	Tuscarawas	limestone sandstone clay	35,710 59,764 74,016	35,710 59,764 74,016	Ts-1517	IM-46
	Belden Pit (57) (57)	Tuscarawas	clay shale	30,345 37,230	30,345 37,230	Ts-1646	IM-44
	Wallick Pit (58) (58)	Tuscarawas	clay shale	22,529 23,686	22,529 23,686	Ts-1841	IM-45
	Shanesville Pit (59) (59)	Tuscarawas	clay shale	33,304 96,282	33,304 96,282	Ts-1939	IM-47
	Beagle Pit (60) Plotner Pit (181) (147) (147)	Tuscarawas Tuscarawas	clay limestone clay shale	8,651	8,651	Ts-1960 Ts-B	IM-48 IM-49
Belville Mining Co., Inc. P.O. Box 834 Ironton, OH 45638 614-643-2331 Robert E. Belville, pres.	Belville Mining Co., Inc. (159) (93)	Lawrence	limestone clay	88,211 27,885	90,747 27,885	Le-B	IM-1188, D-0746
Benco Leasing, Inc. 1012 Commercial Ave. SE New Philadelphia, OH 44663 216-339-3339 Ben Cookson, pres.	Goshen Sand & Gravel (389)	Tuscarawas	sand & gravel	51,277	67,026	Ts-1976	IM-941, IM-942

## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS – Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Best Sand Corp. 11830 Ravenna Rd. Chardon, OH 44024 216-946-3441 Charles Fowler, pres.	Best Sand Corp. (17)	Geauga	sandstone	648,756	759,337	Gea-3	IM-89
Beverly Slag Co. P.O. Box 599 McConnelsville, OH 43756 614-962-5621 Carl L. Price, v. pres.	Devola Pit (364)	Washington	sand & gravel			Wn-55	IM-669
Big Walnut Sand & Gravel Co. 88 W. Mound St. Columbus, OH 43215-5018 614-224-2678 Steven D. Rowe, partner	Big Walnut Sand & Gravel Co. (97)	Franklin	sand & gravel			Fn-14	IM-832
Black Gold Recovery, Inc. 65105 Old Route 800 Barnesville, OH 43713 614-838-6555 Tim Hall, pres.	Black Gold Recovery Limestone (151)	Belmont	limestone	34,518	34,518	Bt-1192	IM-1093
Black Top Contracting, Inc. P.O. Box 98 Belpre, OH 45714 614-423-5455 Terry R. Wyatt, pres.	Black Top #1 (19)	Athens	sand & gravel	14,537	14,537	As-588	IM-630
E. E. Blair Construction Co. P.O. Box 39 Wheelersburg, OH 45694 614-574-6575 Edwin E. Blair, pres.	Blair Pit (303)	Scioto	sand & gravel	95,000	95,000	So-98	IM-474
Blue Jay Enterprises of Tuscarawas Co., Inc. P.O. Box 641 Zoar, OH 44697 216-874-2048 Leland D. Ervin, pres.	Swonger-Waltz Mine (85) (85)	Tuscarawas	clay shale	40,956 12,628	40,956 12,628	Ts-520	IM-214
Bluffton Stone Co. P.O. Box 26 Bluffton, OH 45817-0026 419-358-6941 Brent C. Gerkin, pres.	Bluffton Stone Co. (3)	Allen	limestone	305,950	305,950	An-1	IM-485
Blum Mining Co. P.O. Box 232 Carrollton, OH 44615 216-627-2670 Raymond Blum, pres.	Blum Mining Co. (476) (161)	Mahoning	sand & gravel limestone	39,731	33,628	Mg-629	IM-1008
Bolin & Bartley, Inc. 1217 County Rd. 1475 R.D. 1 Ashland, OH 44805 419-289-1507 Clarence W. Bolin, sec./treas.	Simington Rd. (509) Bolin & Bartley Sand & Gravel (409)	Ashland Richland	sand & gravel sand & gravel	65,585 52,422	65,585 52,422	Ald-16 Rd-20	IM-1120 IM-617
Bowerston Shale Co. 515 Main St. Bowerston, OH 44695 614-269-2921 William U. Milliken, pres.	Bowerston (11) Scott Farm (109)	Harrison Harrison	shale shale	24,497	24,497	Hn-152 Hn-B	IM-42 IM-1020
Bowerston Shale Co. 1329 Seven Hills Rd. NE Newark, OH 43055 614-763-3921 William U. Milliken, pres.	Hanover (31) Frazeyburg (38)	Licking Muskingum	shale clay	36,080	36,080	Lg-501 Mum-776	IM-257 IM-256
D. H. Bowman & Sons, Inc. 1201 Mill St. Bellville, OH 44813-1227 419-886-2711 Richard D. Bowman, pres.	D. H. Bowman & Sons, Inc. (287)	Richland	sand & gravel	58,354	76,784	Rd-4	IM-279



## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS — Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Boyas Excavating, Inc. 4100 Brookpark Rd. Cleveland, OH 44134-1196 216-398-3900 Pete Boyas, pres.	Boyas' Valley View Quarry (595) (13)	Cuyahoga	sand & gravel sandstone	4,000 2,600	4,000 0	Cya-42	IM-686
Boyd Gravel Co. 24270 Twp. Rd. 1202 Coshocton, OH 43812 614-622-4406 Richard Mill, pres.	Boyd Gravel Co. (71)	Coshocton	sand & gravel	149,292	156,686	Cn-694	IM-293
Boyd Gravel Co. 1985 Gene Cox Memorial Dr. Dresden, OH 43821 614-754-3311 Donald Dowell, supt.	Jennings-Lacy (244) Prospect (243) Gilbert Cox (449)	Muskingum Muskingum Muskingum	sand & gravel sand & gravel sand & gravel	235,480	289,048	Mum-799 Mum-863 Mum-899	IM-317 IM-264
Briar Hill Stone Co. P.O. Box 457 Glenmont, OH 44628 216-377-5100 F. L. Waller, pres.	Quarry #26 (4) Quarry #3 (5) Quarry #32 (6) Quarry #24 (7) Quarry #18 (8) Quarry #54 (46) Quarry #55 (44) Quarry #31 (19) Quarry #6 (23)	Coshocton Coshocton Coshocton Coshocton Coshocton Coshocton Coshocton Holmes Knox	sandstone sandstone sandstone sandstone sandstone sandstone sandstone sandstone sandstone	2,705 4,689 2,151 529 109 9,910 1,011	2,705 4,689 2,151 529 109 9,910 1,011	Cn-13 Cn-659 Cn-686 Cn-692 Cn-695 Cn-809 Cn-815 Hs-49 Kx-12	IM-397 IM-232 IM-504 IM-294 IM-402 IM-909 IM-939 IM-418 IM-445
Briggs Sand & Gravel, Inc. Rte. 4 Box 303 County Rd. 10 Marietta, OH 45750 614-373-3363 James F. Briggs, pres.	Briggs Sand & Gravel, Inc. (365)	Washington	sand & gravel	9,558	9,558	Wn-508	IM-57
Brimfield Sand & Gravel 3613 Mogadore Rd. Kent, OH 44240-7431 216-673-7995 Beatrice Roth, pres.	Brimfield Sand & Gravel (605)	Portage	sand & gravel			Pe-BSG	IM-1184
Broadway Sand & Gravel, Inc. 2000 Sandridge Dr. Dayton, OH 45439 513-299-1166 George D. Jones, v. pres.	Broadway Sand & Gravel, Inc. (225)	Montgomery	sand & gravel	31,298	31,298	My-65	IM-594
Broshear Contractors, Inc. 2520 Millville-Ross Rd. Hamilton, OH 45013 513-863-3388 Gerald Broshear, pres.	Ross Township Gravel (31)	Butler	sand & gravel	10,926	10,926	Br-48	IM-562
Karl Brugmann Sand & Gravel, Inc. 8420 Weaver Rd. Ravenna, OH 44266 216-626-3914 Donald H. Brugmann, owner	Karl Bruggman Sand & Gravel, Inc. (257)	Portage	sand & gravel	86,009	86,009	Pe-15	IM-104
Oscar Brugmann Sand & Gravel, Inc. 3828 Dudley Rd. Mantua, OH 44255 216-274-8224 Roy Brugmann, pres.	Oscar Brugmann Sand & Gravel, Inc. (258)	Portage	sand & gravel	483,219	540,000	Pe-9	IM-119
Buckeye Excavating 13354 Arnold Rd. Dalton, OH 44618 216-857-7663 Steven R. Steiner, partner	Steiner Pit (535)	Wayne	sand & gravel	26,559	26,559	We-23	IM-1136
Buckeye-Industrial Mining Co. P.O. Box 389 Lisbon, OH 44460 216-337-9511 John C. Grisham, pres.	Buckeye-Industrial Mining Co. (129) Scott Job (141) Cable Job (146) (146)	Carroll Stark Stark	clay clay clay shale	6,817 6,391 4,915	6,817 6,391 4,915	Cl-B Sk-245 Sk-247	IM-1165 D-0653 D-0929
James Bunnell, Inc. 5730 State Rte. 128 Cleves, OH 45002 513-353-1100 James Bunnell, pres.	James Bunnell, Inc. (123) James Bunnell, Inc. (124) James Bunnell, Inc. (195)	Hamilton Hamilton Hamilton	sand & gravel sand & gravel sand & gravel	612 467,200 265	612 467,200 265	Hmn-50 Hmn-59 Hmn-B	IM-205 IM-815 IM-1139

## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS – Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Burlington Sand & Gravel Co. P.O. Box 399 Chesapeake, OH 45619 614-894-5978 Vernon E. Collier, owner	Burlington Sand & Gravel Co. (170)	Lawrence	sand & gravel	5,149	5,149	Le-426	IM-856
Burrgett Industries, Inc. P.O. Box 651 Newcomerstown, OH 43832 614-498-8561 Thomas J. Miller, pres.	Burrgett Industries, Inc. (532)	Tuscarawas	sand & gravel			Ts-2029	IM-1129
C & S Contractors, Inc. P.O. Box 42459 Cincinnati, OH 45242 513-791-7747 Raymond A. Conn, pres.	C & S Contractors, Inc. (356)	Warren	sand & gravel			Wan-47	IM-846
Canton Aggregate Div. of Central Allied Enterprises, Inc. P.O. Box 80449 Canton, OH 44708-0449 216-477-6751 John A. Woodhall, Jr., pres.	Canton Aggregate (318) Canton Aggregate (319)	Stark Stark	sand & gravel sand & gravel	500,689 158,062	439,431 155,008	Sk-681 Sk-689	IM-164 IM-173
Carter & Carter, Inc. P.O. Box 266 Miamisburg, OH 45343-0266 513-239-0554 Charles V. Carter, pres.	Carter & Carter, Inc. (561) (157)	Montgomery	sand & gravel clay	909 50	909 50	My-CW	IM-878
Andrew Cashen 1225 Dock Rd. Madison, OH 44057 216-428-1148 Andy Cashen, owner	Andrew Cashen (597)	Lake	sand & gravel			Lke-C	IM-1215
Cedar Heights Clay Co. Division of Resco Products, Inc. P.O. Box 295 Oak Hill, OH 45656-0295 614-682-7794 William T. Tredennick, pres.	Gallia Red Sand (507) Shumate/Alban (21) Cedarloo/Jenkins/Greer (22) Katie Walke (91) Sadler (145) (145)	Gallia Jackson Jackson Jackson Jackson	sand & gravel clay clay clay clay shale	513 29,093 16,795 7,929	513 29,093 16,795 7,929	Ga-507 Jkn-1001 Jkn-1007 Jkn-CH Jkn-CH1	IM-1074 IM-19 IM-24 IM-1060 IM-1182
Celotex Corp. P.O. Box 280 Port Clinton, OH 43452 419-734-3153 William S. Sokoloski, plant controller	American #2 (1)	Ottawa	gypsum	233,172	233,172	Oa-2	IM-344
Center West Enterprise, Inc. 4901 W. Market St. Leavittsburg, OH 44430 216-898-5394 Andrew B. Polivka, pres.	Center West Enterprise, Inc. (611)	Trumbull	sand & gravel	9,502	9,502	Tl-C	IM-1190
Central Ohio Coal Co. P.O. Box 98 Cumberland, OH 43732-0098 614-962-2013 Gary Dimmerling, gen. mgr.	Meigs Creek (165) Coal Hill (166)	Morgan Muskingum	limestone limestone	161,744	161,744	Mon-C Ne-C	IM-1010 D-0820
Central Silica Co. 806 Market St. P.O. Box 4477 Zanesville, OH 43702-4477 614-452-2775 James P. Snider, v. pres. & gen. mgr.	Millwood Sand Division (24) Glass Rock (48) (137)	Knox Perry	sandstone sandstone clay	151,731 386,989	151,731 386,989	Kx-1 Py-344	IM-269 IM-1014
Jeff Chaney P.O. Box 466 Killbuck, OH 44637 216-276-2444 Jeff Chaney, owner	Spring Run Gravel (416) (111)	Holmes	sand & gravel shale	13,581	13,581	Hs-96	IM-997
Charlestown Sand & Gravel, Inc. 7845 State Rte. 5 Ravenna, OH 44266 216-296-9233 Yale Stuble, pres.	Charlestown Sand & Gravel, Inc. (259)	Portage	sand & gravel	33,040	33,040	Pe-17	IM-123

## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS — Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Chattin Concrete 9978 State Rte. 220 P.O. Box 49 Waverly, OH 45690 614-947-4677 Jeffery Chattin, owner	Chattin Concrete (253)	Pike	sand & gravel	800	0	Pke-23	IM-242
Chesterhill Stone Co. 773 East State Rte. 60 NE P.O. Box 599 McConnelsville, OH 43756 614-962-5621 Carl R. Price, v. pres.	Plant #2 (240) Chesterhill Stone Co. (478) Graham Farm (563) Plant #1 (75)	Morgan Morgan Morgan Muskingum	sand & gravel sand & gravel sand & gravel limestone	106,122 189,870 638,186	85,077 175,316 626,371	Mon-588 Mon-CS Mon-CSC Mum-106	IM-35 IM-1105 IM-1178 IM-297
Chesterville Sand & Gravel Co., Inc. State Rte. 95 E P.O. Box 51 Chesterville, OH 43317 419-768-3369 Carrol D. Gleason, pres.	Chesterville Sand & Gravel Co., Inc. (242)	Morrow	sand & gravel	125,025	125,025	Mw-10	IM-258
Chillicothe Sand & Gravel Co. 1177 Hopetown Rd. Chillicothe, OH 45601 614-775-3751 Don E. Mill, pres.	Chillicothe Sand & Gravel Co. (490)	Ross	sand & gravel	238,863	270,315	Rs-27	IM-1098
Christman Quarry 47278 Swazey Rd. Lewisville, OH 43754 614-838-2475 Gerald L. Christman, owner	Christman Quarry (163)	Monroe	limestone	77,468	77,468	Me-C	IM-1088
Clark Clay Co. 6918 Township Rd. 310 Millersburg, OH 44654 216-674-5150 Dwight S. Clark, owner	Clark Clay Co. (17)	Holmes	clay	2,907	1,605	Hs-56	
Claycraft Co. P.O. Box 866 Columbus, OH 43216 614-866-3300 P. W. Tefft, pres.	Claycraft Plant #1 Clay Pit (73)	Wyandot	clay			Wt-7	IM-407
Cleveland Quarries, L.P. P.O. Box 261 Amherst, OH 44001-0261 216-986-4501 Walter Molnor, pres.	Birmingham Quarry (14) Amherst Quarries (27)	Erie Lorain	sandstone sandstone	238 3,675	238 3,675	Ee-21 Ln-3	IM-416 IM-415
M. J. Coates Construction Co. P.O. Box 231 Centerville, OH 45459 513-433-1581 M. J. Coates, owner	M. J. Coates Construction Co. (548)	Greene	sand & gravel	127,201	127,201	Ge-47	IM-751
Cochran Transportation Services, Inc. P.O. Box 578 Athens, OH 45701 614-593-3906 Charles W. Cochran, pres.	Cochran Transportation Services, Inc. (458) (87)	Athens	sand & gravel clay	44,964	44,964	As-595	IM-1083
Boone Coleman Route 5, Box 292 Portsmouth, OH 45662 614-858-6661 Boone Coleman, pres.	Boone Coleman (576)	Scioto	sand & gravel	4,000	4,000	So-B	IM-705
Con-Ag, Inc. 16672 County Rd. 66A N St. Marys, OH 45885 419-394-8870 Robert E. Hirschfeld, pres.	Con-Ag, Inc. (10)	Auglaize	limestone	210,743	226,230	Ae-31	IM-744
Conotton Valley Quarries Co. P.O. Box 207 Sherrodsville, OH 44675 614-269-3481 Nick J. Puskarich, pres.	Conotton Valley Quarries Co. (1)	Carroll	sandstone			Cl-102	IM-278



## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS — Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Craigton Shale Co. 2880 E. Easton Rd. Creston, OH 44217 216-435-6535 Leonard D. Schemrich, owner	Craigton Shale Co. (165)	Wayne	shale			We-25	IM-1209
Crates Excavating 14628 State Rte. 31 Kenton, OH 43326 419-675-1558 J. Roger Crates, owner	Crates #2 (469)	Hardin	sand & gravel			Hdn-C	IM-1081
Cremeans Concrete & Supply Georges Creek Rd. P.O. Box 475 Gallipolis, OH 45631 614-446-1142 Frank A. Cremeans, pres.	Cremeans Concrete & Supply (440)	Gallia	sand & gravel	5,803	5,803	Ga-626	IM-1046
Crosby Gravel 9570 State Rte. 128 Harrison, OH 45030 513-738-0077 Joseph Prus, pres.	Miamitown Sand & Gravel (121)	Hamilton	sand & gravel			Hmn-44	IM-120
R. A. Cruise Sand & Gravel, Inc. 7639 State Rte. 14 Ravenna, OH 44266 216-296-4087 Larry R. Cruise, pres.	R. A. Cruise Sand & Gravel, Inc. (261)	Portage	sand & gravel	34,744	30,385	Pe-45	IM-139
Cunningham Asphalt Paving, Inc. P.O. Box 370 Wheelersburg, OH 45694 614-574-6184 Karl Cunningham, pres.	Cunningham Pit (304)	Scioto	sand & gravel			So-83	IM-211
D. & D. Mining Co. 3379 E. Garfield Rd. New Springfield, OH 44443 216-549-3127 Donald Thompson, pres.	D. & D. Mining Co. (57)	Columbiana	sandstone	946	946	Ca-888	IM-1181
	D. & D. Strip (130)	Columbiana	shale clay	5,707 35,786	5,707 35,786	Ca-348	IM-976
D & D Sand Bank Rte. 7 Box 473 South Point, OH 45680 614-377-4765 Eileen Pemberton, owner	D & D Sand Bank (388)	Lawrence	sand & gravel	4,985	4,985	Le-445	IM-928
D & W Sand & Gravel 10677 Wren Rd. Mechanicsburg, OH 43044 513-834-2548 Dale Potter, owner	D & W Sand & Gravel (49)	Champaign	sand & gravel	3,952	3,952	Cpn-21	IM-616
Darby Gravel Co. 9780 U.S. Route 62 Orient, OH 43146 614-877-4184 Louis Johnson & Dwight Harris, owners	Darby Gravel Co. (564) (139)	Pickaway	sand & gravel clay	6,560	6,560	Pky-D	IM-1150
Davon, Inc. 4281 Roush Rd. Hillsboro, OH 45133 513-393-4211 John B. Patton, pres.	Plum Run Stone Division (1)	Adams	limestone	1,544,767	1,593,323	Ads-1	IM-237
	Davon, Inc. (184)	Adams, Brown	limestone			Ads-BN	IM-1195
	Highland Stone Division (41)	Highland	limestone	730,830	730,012	Hd-2	IM-230
DeMilta Sand & Gravel, Inc. 921 Erie Rd. Eastlake, OH 44094 216-942-2015 Nick DeMilta, pres.	DeMilta Sand & Gravel, Inc. (598)	Lake	sand & gravel			Lke-D	IM-1187
Demmy Construction, Inc. 4999 Tecumseh Rd. Springfield, OH 45502 513-325-9429 Daniel E. Demmy, pres.	Kieffer Pit (385)	Clark	sand & gravel	15,149	15,149	Ck-501	IM-340

## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS — Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Demmy Sand & Gravel 4324 Fairfield Pike Springfield, OH 45502 513-325-8840 Woodrow Demmy, owner	Demmy Sand & Gravel (54)	Clark	sand & gravel	8,186	8,186	Ck-502	IM-375
Dennis Clay Co. 11123 State Rte. 37 East New Lexington, OH 43764 614-342-5473 Tom L. Dennis, owner	Ohio Power (124) (124) Dennis Clay Co. (108)	Muskingum	clay shale	14,107 10,995	14,107 10,995	Mum-903	IM-1115
	Dennis Clay Co. (108)	Perry	clay shale	18,560 39,940	18,560 39,940	Py-338	IM-1092
	Dennis Clay Co. (67) (159)	Perry	sandstone clay	2,725	2,725	Py-DCC	IM-1192
A. J. Diana Sons, Inc. 1916 Erie Ave. NW P.O. Box 488 Massillon, OH 44648 216-832-5904 Virgil V. Diana, pres.	Neidert Pit (320)	Stark	sand & gravel	3,641	3,641	Sk-694	IM-858
Dingledine Basic Materials, Inc. 2304 Somerville Rd. P.O. Box 86 Somerville, OH 45064 513-726-5258 Gerald Dingledine, owner	Dingledine Basic Materials, Inc. (32)	Butler	sand & gravel	107,360	107,360	Br-50	IM-739
Dome Minerals, Inc. 15601 Emerick Rd. Kensington, OH 44427 216-223-1413 Fred A. Rogers, pres.	Dome Minerals, Inc. (79)	Columbiana	shale	6,871	6,871	Ca-947	IM-935
Don's Dozer Service 8200 Seasons Rd. Streetsboro, OH 44241 216-626-5147 Donald R. McElravy, pres.	Don's Dozer Service (529)	Portage	sand & gravel	862	862	Pe-96	IM-792
James E. Downard 1885 Mt. Zwingli Rd. Bremen, OH 43107 614-569-7849 James E. Downard, owner	James E. Downard (541) (155)	Fairfield	sand & gravel clay	497 165	497 165	Fd-16	IM-1156
Dravo Basic Materials Co., Inc. 5253 Wooster Rd. Cincinnati, OH 45226 513-321-2700 H. Donovan Ross, pres.	Fairfield Plant (33) Ross Plant (34) Cleves Plant (126) Camp Dennison Plant (127) Newtown Plant (128) Cleves Plant (130) Cleves Plant (131) Newtown Plant (128) Dravo Basic Materials Co., Inc. (468) Lynchburg Plant (175) Apple Grove Plant (209) South Lebanon Plant (352)	Butler Butler Hamilton Hamilton Hamilton Hamilton Hamilton Hamilton Hamilton Highland Meigs Warren	sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel limestone sand & gravel sand & gravel	771,216 1,003,080 594,308 <sup>1</sup> 2	779,462 1,261,503 981,880 189,870 695,461	Br-14 Br-29 Hmn-3 Hmn-5 Hmn-11 Hmn-64 Hmn-68 Hmn-70 Hmn-D Hd-D Ms-205 Wan-41 <sup>3</sup>	IM-147 IM-149 IM-137 IM-148 IM-133 IM-821 IM-747 IM-133 IM-1079 IM-1170 IM-30 IM-629
Fred J. Dreslinski 5870 State Rte. 193 Kingsville, OH 44048 216-224-0195 Fred J. Dreslinski, pres.	Fred J. Dreslinski (457)	Ashtabula	sand & gravel			Asa-13	IM-785
Dry Creek Gravel Co. 2097 Mt. Vernon Rd. Newark, OH 43055 614-366-3333 Gail Wolfe, pres.	Plant #2 (176) Plant #3 (177)	Licking Licking	sand & gravel sand & gravel	49,306 160,167	49,306 139,217	Lg-31 Lg-DC	IM-246 IM-354
C. E. Duff & Son, Inc. P.O. Box 295 Huntsville, OH 43324 513-686-2488 James E. Duff, pres.	Forest Quarry (156) Portable (444) C. E. Duff & Son, Inc. (50) Duff Sand Co. (182) C. E. Duff & Son, Inc. (420) C. E. Duff & Son, Inc. (183)	Hardin Logan Logan Logan Logan Logan	limestone sand & gravel limestone sand & gravel sand & gravel sand & gravel	308,915 83,773 3,859	308,915 83,773 3,859	Hdn-S Lgn-12 Lgn-15 Lgn-31 Lgn-36 Lgn-39	IM-1034 IM-1071 IM-453 IM-454 IM-1007 IM-887

<sup>1</sup>Information for Hmn-64 is included with Hmn-3.<sup>2</sup>Information for Hmn-70 is reported under Hmn-11.<sup>3</sup>See also Carl E. Oeder & Sons Sand & Gravel.

## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS – Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
E. A. Construction, Inc. 7013 S. Funk Rd. Shreve, OH 44676 216-496-2531 Ellis Aylsworth, pres.	E. A. Construction, Inc. (613)	Wayne	sand & gravel	80	80	We-24	IM-1211
E.M.A.I. Corp. dba ESSROC Materials, Inc. P.O. Box 5250 Poland, OH 44514 216-536-6275 Philippe Milliet, CEO	ESSROC Materials, Inc. (160) Bessemer Pit (57) (34) Carbon Pit (162) (107) (107)	Lucas Mahoning Mahoning	limestone limestone shale limestone clay shale	350,000 925,666 58,505 1,188,570 63,947	350,000 925,666 58,505 1,188,570 63,947	Ls-12 Mg-608 Mg-EM	IM-953 IM-4 IM-1056
East Fairfield Coal Co. 10900 South Ave. P.O. Box 217 North Lima, OH 44452 216-549-2165 R. E. Mackall, pres.	East Fairfield Coal Co. (602) (171) (53) (118)	Mahoning	sand & gravel limestone sandstone clay			Mg-631	IM-1103
Easton Resources, Inc. 1485 Route 322E Orwell, OH 44076 216-422-3200 Milven W. Easton, pres.	Easton Resources, Inc. (592)	Ashtabula	sand & gravel	1,275	1,275	Asa-E	IM-1214
Eaton Sand & Gravel Co. 11641 Mosteller Rd. Cincinnati, OH 45241 513-771-0820 Charles Bucklew, pres.	Eaton Sand & Gravel Co. (132)	Hamilton	sand & gravel	1,200	1,200	Hmn-46	IM-396
R. A. Eberts Co., Inc. P.O. Box 191 Jackson, OH 45640 614-682-3506 Phil A. Bowman, pres.	Diamond Stone (9) (128)	Athens	limestone clay	262,552	276,573	As-533	IM-17
Daniel Ebie Trucking 3072 Congress Lake Rd. Mogadore, OH 44260 216-678-2411 Daniel Ebie, owner	Daniel Ebie Trucking (568)	Portage	sand & gravel	16,176	16,176	Pe-E	IM-1154
David E. Edington P.O. Box 282 Frankfort, OH 45628 614-998-5328 David E. Edington, owner	David E. Edington (573)	Ross	sand & gravel	5,296	5,296	Rs-E	IM-1168
Elm Spring Farm 938 State Rte. 207 Chillicothe, OH 45601 614-775-5525 Joanna J. Haskins, owner	Elm Spring Farm (297)	Ross	sand & gravel	8,300	8,300	Rs-26	IM-922
Embros, Inc. 8320 N. State Rte. 123 Franklin, OH 45005 513-746-6121 Ronald Martz, pres.	Embros, Inc. (589)	Warren	sand & gravel	80,292	77,953	Wan-7	IM-151
Bill Enyart & Son Contracting, Inc. 410 Solida Rd. South Point, OH 45680 614-377-4208 William R. Enyart, pres.	Bill Enyart & Son Contracting, Inc. (599)	Lawrence	sand & gravel	3,149	3,149	Le-E	IM-1197
Erie Blacktop, Inc. 4507 Tiffin Ave. P.O. Box 2308 Sandusky, OH 44870 419-625-7374 Dean Wikel, pres.	Erie Blacktop Quarry (24) Erie Blacktop Sand & Gravel Pit (417)	Erie Huron	limestone sand & gravel	76,771	218,795	Ee-27 Hrn-16	IM-608 IM-975
Erie Materials, Inc. 4507 Tiffin Ave. Sandusky, OH 44870 419-625-7374 Dean Wikel, pres.	Erie Materials, Inc. (83)	Erie	sand & gravel			Ee-18	IM-676



## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS – Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Erie Sand & Gravel Co. P.O. Box 179 Erie, PA 16512-0179 814-453-6721 Sidney E. Smith, Jr., pres.	Erie Sand & Gravel Co. (1)	Lake Erie	sand & gravel (dredged)	39,663	39,663	Ee-D	
John James Estes & Assoc., Inc. P.O. Box 30912 Columbus, OH 43230 614-252-0086 Johnny E. Estes, pres.	John James Estes & Assoc., Inc. (160)	Pike	clay	21,000	21,000	Pke-J	IM-1194
Craig Fankhauser 13 Knollwood Perrysburg, OH 43551 419-535-5931 Craig Fankhauser, owner	Craig Fankhauser (557)	Lucas	sand & gravel	8,163	8,163	Ls-F	IM-1160
Feikert Sand & Gravel, Inc. 6971 County Rd. 189 Millersburg, OH 44654-9186 216-674-0038 Lynn O. Feikert, pres.	Feikert Sand & Gravel, Inc. (154)	Holmes	sand & gravel	103,274	103,274	Hs-511	IM-1048
Fenner Sand & Gravel, Inc. 7131 W. Fenner Rd. Ludlow Falls, OH 45339 513-698-7048 Robert P. Snead, pres.	Woodville Concrete Corp. (222)	Miami	sand & gravel	188,000	188,000	Mi-4	IM-472
Fleckenstein Farm Gravel Pit 11251 State Rte. 66 Minster, OH 45865 513-295-2417 Ferd J. Fleckenstein, owner	Fleckenstein Farm Gravel Pit (310)	Shelby	sand & gravel	2,611	2,611	Shy-12	IM-528
Fleming Construction Co., Inc. P.O. Box 31 Marion, OH 43301-0031 614-494-2177 Gerald E. Fleming, pres.	Fleming Construction Co., Inc. (423)	Marion	sand & gravel			Mn-F	IM-990
Flesher Sand & Gravel, Inc. 3322 Clark Mill Rd. Norton, OH 44203 216-745-9239 James E. Flesher, pres.	Flesher Sand & Gravel, Inc. (327)	Summit	sand & gravel	58,448	58,448	St-52	IM-900
David L. Florence 1617 Staunton Ave. Parkersburg, WV 26101 304-428-3035 Joan D. Florence, owner	David L. Florence (163)	Washington	clay	5,529	5,529	Wn-F	IM-128
Foureman's Sand & Gravel, Inc. 2791 Wildcat Rd. Greenville, OH 45331 513-548-8626 Gary B. Foureman, pres.	Foureman's Sand & Gravel, Inc. (80)	Darke	sand & gravel	36,984	36,984	Dke-4	IM-433
Fox Stone Products, Inc. P.O. Box 299 Put-In-Bay, OH 43456 419-285-3025 Richard H. Fox, owner	Fox Stone Products, Inc. (180)	Ottawa	limestone	8,000	8,000	Oa-18	IM-635
The France Stone Co. 8130 Brint Rd. P.O. Box 278 Sylvania, OH 43560-0278 419-882-0123 Brian J. Wheeler, pres.	Waterville (52) Sylvania (53) Paulding (86) Flat Rock (107) Bloomville (108) Custar (129)	Lucas Lucas Paulding Seneca Seneca Wood	limestone limestone limestone limestone limestone limestone	586,380 1,376,352 346,510 1,217,229 569,221 275,262	852,827 1,397,936 328,421 1,630,951 605,158 275,991	Ls-1 Ls-3 Pg-7 Sa-1 Sa-3 Wd-5	IM-575 IM-580  IM-347 IM-349 IM-473
Friendsville Sand, L.P. 9601 Avon Lake Rd. Lodi, OH 44254 216-948-4338 Richard L. Rothel, pres.	Friendsville Sand, L.P. (558)	Medina	sand & gravel	61,725	61,725	Ma-23	IM-1177
Lloyd Fry P.O. Box 1515 Piqua, OH 45356 513-773-1541 Lloyd Fry, pres.	Lloyd Fry (390)	Miami	sand & gravel			Mi-T	IM-696

## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS — Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Frye Sand & Gravel, Inc. 3049 S. Denmark Rd. P.O. Box 3 Dorset, OH 44032 216-858-2627 Harold L. Frye, owner	Frye Sand & Gravel, Inc. (9)	Ashtabula	sand & gravel	2,089	2,089	Asa-10	IM-198
G & M Supply, Inc. dba Clinton Stone, Inc. 1203 N. Pennsylvania Ave. P.O. Box 468 Wellston, OH 45692 614-384-5659 Bonny A. Huffman, pres.	Sands Hill (124)	Vinton	limestone			Vn-174	D-0309
Ganges Gravel 153 North Gambel St. P.O. Box 42 Shelby, OH 44875 419-342-5361 J. J. Scott, owner	Ganges Gravel (289)	Richland	sand & gravel	877	877	Rd-18	IM-670
John L. Garber Materials, Inc. Rte. 8 Lexington, OH 44904 419-884-1567 John L. Garber, pres.	John L. Garber Materials, Inc. (290)	Richland	sand & gravel	278,833	288,711	Rd-14	IM-436
Al Gasser Excavating, Inc. 1308 Gasser Rd. NW Dover, OH 44622 216-343-9407 Allen L. Gasser, pres.	Al Gasser Excavating, Inc. (587)	Tuscarawas	sand & gravel	750	750	Ts-G	IM-1151
General Clay Products Corp. P.O. Box 236 Baltic, OH 43804-0236 216-897-7171 Harold B. Epler, Jr., pres.	Drescher Pit (6) (6)	Coshocton	clay shale	10,238 13,272	10,238 13,272	Cn-787	IM-610
	Troyer Pit (18)	Holmes	shale			Hs-77	IM-545
General Clay Products Corp. P.O. Box 550 Logan, OH 43138 614-385-5616 Harold B. Epler, Jr., pres.	General Clay Products Corp. (12) (12)	Hocking	clay shale	30,337 13,707	30,337 13,707	Hg-205	IM-21
	General Clay Products Corp. (110)	Hocking	shale	3,800	3,800	Hg-330	IM-1013
General Clay Products Corp. P.O. Box 340 Wadsworth, OH 44281 216-335-1515 Harold B. Epler, Jr., pres.	General Clay Products Corp. (37)	Medina	shale	46,606	46,606	Ma-6	IM-455
GenLime Group, L.P. P.O. Box 158 Genoa, OH 43430 419-855-8336 P. J. Senechal, pres.	GenLime Group, L.P. (85)	Ottawa	limestone	637,190	363,593	Oa-1	IM-292
Gerken Materials, Inc. P.O. Box 607 Napoleon, OH 43545 419-533-2421 Julian A. Gerken, pres.	Gerken Materials, Inc. (147) Gerken Materials, Inc. (614)	Henry Williams	sand & gravel sand & gravel	80,225	80,225	Hy-5 Ws-20	
Gibson Sand & Gravel Co. 1385 Knorr Rd. Galion, OH 44833 419-468-5527 Arthur T. Gibson, owner	Gibson Sand & Gravel Co. (75)	Crawford	sand & gravel	768	768	Cd-3	IM-693
Glen-Gery Corp. P.O. Box 398 Caledonia, OH 43314 419-845-3321 Evan Davis, plant supt.	Glen-Gery Corp. (36)	Marion	shale	161,385	161,385	Mn-7	IM-309
Golden Crescent Construction, Inc. 1104 Milan Ave. Amherst, OH 44001 216-967-6822 Samuel T. Bartlett, pres.	Golden Crescent Construction, Inc. (66)	Lorain	sandstone			Ln-G	IM-1205

## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS – Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
David B. Good 10442 W. Easton Rd. West Salem, OH 44287 419-846-3912 David B. Good, owner	David B. Good (508)	Ashland	sand & gravel	420	410	Ald-G	IM-1121
Good Builders 35280 Linton Rd. Logan, OH 43138 614-385-5872 Steve Good, owner	Good Builders (596)	Hocking	sand & gravel	1,353	1,353	Hg-G	IM-1201
Goodwin Sand & Gravel, Inc. 126 S. Norton St. Mt. Vernon, OH 43050 614-392-7971 Thomas J. Mill, pres.	Goodwin Sand & Gravel, Inc. (160)	Knox	sand & gravel	119,875	146,000	Kx-7	IM-235
Gottron Bros. Co. 100 South Stone St. Fremont, OH 43420 419-332-5281 Harry P. Gottron, Jr., v. pres.	Gottron Bros. Co. (101)	Sandusky	limestone	89,249	73,797	Sy-5	IM-259
James D. Graham 2036 State Route 725 Spring Valley, OH 45370 513-293-1165 James D. Graham, owner	James D. Graham (550)	Greene	sand & gravel			Ge-G	IM-655
The Gravel Co. 325 Clark Rd. P.O. Box 15501 Cincinnati, OH 45215 513-761-4980 Roy B. Schweitzer, pres.	Cleves (141)	Hamilton	sand & gravel			Hmn-28	IM-353
The Gravel Co. 151 Seven Mile Ave. New Miami, OH 45011 513-761-4980 Roy B. Schweitzer, pres.	New Miami Pit (42)	Butler	sand & gravel	87,785	87,785	Br-3	IM-719
Green Basin Coal, Inc. Rte. 1 Box 49C Strasburg, OH 44680 216-343-5231 Jerry Kohl, pres.	Blackhawk (169) (63) (103) (103)	Tuscarawas	limestone sandstone clay shale	50,453 80,000	39,581 80,000	Ts-2024	IM-1087
Green Oaks Potting Products, Inc. 2222 Lake Rockwell Rd. P.O. Box 979 Ravenna, OH 44266 216-296-2157 John A. Lyon, pres.	Green Oaks Potting Products, Inc. (7) (451) (161)	Portage	peat sand & gravel clay	1,742 418 198	1,742 418 198	Pe-89	IM-1142
Gregory Materials Co. 14133 U.S. Rte. 23 N Waverly, OH 45690 614-947-5559 Ernest Gregory, owner	Plant #1 (254)	Pike	sand & gravel	2,991	2,991	Pke-30	IM-786
H. T. Griffin Excavating, Inc. Route 5 Box 217 Swanton, OH 43558 419-826-0230 Henry T. Griffin, owner	H. T. Griffin Excavating, Inc. (472)	Lucas	sand & gravel			Ls-G	IM-1090
Grimes Excavating Rte. 3 Box 121 New Matamores, OH 45767 614-865-2267 John Grimes, partner	Grimes Excavating (533)	Washington	sand & gravel			Wn-1008	IM-1111
Gwin Contracting Co. P.O. Box 205 Columbiana, OH 44408 216-482-2442 Lyle D. Gwin, pres.	Gwin Contracting Co. (30)	Mahoning	sandstone	8,970	8,970	Mg-62	IM-599
H & H Utilities Co. 7307 S. Kessler-Frederick Rd. West Milton, OH 45383 513-223-6752 Gerald Hochwalt, pres.	H & H Gravel (229)	Montgomery	sand & gravel	11,534	11,534	My-68	IM-646



## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS – Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
J. M. Hamilton & Sons Co., Inc. 1974 Marion-Bucyrus Rd. Marion, OH 43302 614-382-2189 O. E. Hamilton, pres.	J. M. Hamilton & Sons Co., Inc. (59)	Marion	limestone	112,692	112,692	Mn-2	IM-423
Hardin Quarry Co., Inc. 12484 State Rte. 701 Kenton, OH 43326 419-675-1327 Richard Pees, pres.	Hardin Quarry Co., Inc. (38)	Hardin	limestone	180,211	180,211	Hdn-2	IM-443
Norman Harpster 16069 State Rte. 235 Belle Center, OH 43310 513-464-5623 Norman Harpster, owner	Norman Harpster (553)	Hardin	sand & gravel			Hdn-H	IM-864
Harrison Sand & Gravel Co. 10980 Campbell Rd. Harrison, OH 45030 513-637-5174 Donald Gauck, v. pres.	Harrison Sand & Gravel Co. (135)	Hamilton	sand & gravel	86,455	85,800	Hmn-17	IM-295
Haubeil & Sons Asphalt & Materials, Inc. 379 Seney Rd. Chillicothe, OH 45601 614-773-6358 George Haubeil, pres.	Haubeil & Sons Asphalt & Materials, Inc. (491)	Ross	sand & gravel	43,965	43,965	Rs-H	IM-1052
Haueter Sand & Gravel, Inc. P.O. Box 206 Chardon, OH 44024 216-286-9482 Donald H. Haueter, pres.	Haueter Sand & Gravel, Inc. (108) Haueter Sand & Gravel, Inc. (545)	Geauga Geauga	sand & gravel sand & gravel	215,783	215,783	Gea-29 Gea-H	IM-215 IM-510
Heiser Sand & Gravel P.O. Box 2491 North Canton, OH 44720 216-499-8201 Richard L. Heiser, owner	Heiser Sand & Gravel (323) Heiser Sand & Gravel (608) Heiser Sand & Gravel (609)	Stark Stark Stark	sand & gravel sand & gravel sand & gravel	32,694	109,637	Sk-688 Sk-HS Sk-HS1	IM-763 IM-1193 IM-1203
Paul N. Herdman P.O. Box 36 Lebanon, OH 45036 513-233-5555 Paul N. Herdman, pres.	Paul N. Herdman (429)	Warren	sand & gravel	620	620	Wan-46	IM-679, IM-842
Hidden Harbour Partners 6725 West Central Ave. Toledo, OH 43617 419-841-2980 Robert Dame & Richard Moses, partners	Centennial Rd. Pit (601)	Lucas	sand & gravel	4,669	4,669	La-H	IM-1217
Hillcrest Coal, Ltd. 190 S. Main St. Magnolia, OH 44643 216-866-9388 Kermit & Richard James, Jr., partners	Hillcrest Coal, Ltd. (102)	Stark	clay			Sk-HC	IM-1037
Hillsdale Sand & Gravel, Inc. P.O. Box 223 Archbold, OH 43502 419-445-1015 Dean Miller, pres.	Hillsdale Sand & Gravel, Inc. (82)	Defiance	sand & gravel	24,571	24,571	De-2	IM-765
Hilltop Aggregate, Inc. P.O. Box 362 Mogadore, OH 44260 216-644-3274 Robert W. West, pres.	Hilltop Aggregate, Inc. (262)	Portage	sand & gravel	426,062	426,062	Pe-56	IM-127
Hilltop Basic Resources, Inc. One West Fourth St., Suite 1100 Cincinnati, OH 45202-3615 513-878-8631 John Steele, Jr., pres.	Fairborn Aggregate Plant (112) West Carrollton Aggregate Plant (232)	Clark, Greene Montgomery	sand & gravel sand & gravel	513,547 799,832	535,899 545,248	Ge-4 My-19	IM-394 IM-401, IM-916

## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS – Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Hilltop Basic Resources, Inc. dba Enon Washed Sand & Gravel Co. 1665 Enon-Donnelsville Rd. P.O. Box 363 Enon, OH 45323 513-878-8631 John Steele, Jr., pres.	Enon Washed Sand & Gravel Co. (57)	Clark	sand & gravel	275,813	256,679	Ck-3	IM-463
Hocking Valley Concrete, Inc. 35255 Hocking Dr. Logan, OH 43138 614-385-2165 William G. Vaughn, pres.	Hocking Valley Concrete, Inc. (151)	Hocking	sand & gravel	70,000	70,000	Hg-262	IM-41
William A. Hoffman, Jr. 25043 State Rte. 104 Circleville, OH 43113 614-474-2002 William A. Hoffman, Jr., owner	Hoffman Pit (480)	Pickaway	sand & gravel	6,621	6,621	Pky-H	IM-1039
Tom Hollinger Excavating 2097 Hollansburg-Arcanum Rd. New Madison, OH 45346 513-996-5381 Thomas W. Hollinger, leasee	Hollinger Gravel Plant (81)	Darke	sand & gravel	1,336	1,336	Dke-10	IM-326
Holloway Sand & Gravel Co., Inc. P.O. Box 416 West Union, OH 45693 513-544-5524 Dan Holloway, pres.	Holloway Sand & Gravel Co., Inc. (173)	Adams	limestone			Ads-H	IM-805
Holmes Limestone Co. P.O. Box 295 Berlin, OH 44610 216-893-2721 Merle Mullet, pres.	241 Plant (44) (19) Wayne Mines (45) (143) Bolivar Mine (76)	Holmes  Holmes, Wayne Stark	limestone clay shale limestone clay clay	109,658 19,053 3,193  31,589	109,658 19,053 3,193  31,589	Hs-67  Hs-79 Sk-235	IM-3, IM-768  IM-656 IM-945
Honey Creek Stone Co. P.O. Box 286 Petersburg, OH 44454 216-542-2372 Dominic Polito, pres.	Honey Creek Stone Co. (56)	Mahoning	limestone	172,958	189,740	Mg-54	IM-93
Huck Farms 1162 S. Riverside Dr. McConnelsville, OH 43756 614-962-3467 Louis & Cecil Huck, partners	Huck Farms (241)	Morgan	sand & gravel			Mon-599	
Hugo Sand Co. 7055 State Rte. 43 Kent, OH 44240 216-587-2700 Dorothy M. Stroh, pres.	Hugo Sand Co. (264)	Portage	sand & gravel	217,737	217,737	Pe-10	IM-138
Hutson Road Mining Co. 1200 W. South Range Rd. North Lima, OH 44452 216-549-5214 John Curatola, partner	Hutson Road Mining Co. (539)	Columbiana	sand & gravel	297	297	Ca-H	IM-634
Hydraulic Press Brick Co. 8900 Hemlock Rd. P.O. Box 31330 Independence, OH 44131 314-621-9306 W. W. Allen, Jr., pres.	Hydraulic Press Brick Co. (7)	Cuyahoga	shale	209,333	209,333	Cya-19	IM-95
Indian Creek Sand & Gravel Co. P.O. Box 330 Oxford, OH 45056 513-523-8805 Gaston Bowling, pres.	Indian Creek Sand & Gravel Co. (37)	Butler	sand & gravel	6,229	6,229	Br-40	IM-493
J & A Excavating 4130 Flatfoot Rd. Cable, OH 43009 513-652-3504 John Holbrook, owner	J & A Excavating (513)	Champaign	sand & gravel	250	250	Cpn-J	IM-1133

## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS — Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
J. P. Sand & Gravel Co. 5911 Lockbourne Rd. P.O. Box 2 Lockbourne, OH 43137 614-497-0083 Richard A. Roberts, pres.	J. P. Sand & Gravel Co. (98)	Franklin	sand & gravel	517,299	517,299	Fn-52	IM-191
JTM Industries, Inc. 1000 Cobb Place Blvd., Bldg. 400 Kennesaw, GA 30144 404-424-1900 Bill Fletcher, pres.	JTM Industries, Inc. (154)	Coshocton	clay			Cn-JTM	IM-1199
Janson's Soil Service, Inc. 1492 Mechanicsville Rd. Rock Creek, OH 44084 216-466-3835 Peter E. Janson, Jr., pres.	Janson's Soil Service, Inc. (10) (82) (82)	Ashtabula	sand & gravel clay shale	230 350	230 350	Asa-14	IM-563
Jarrett Sand Co. 6505 Skadden Rd. Sandusky, OH 44870 419-359-1750 James Jarrett, owner	Jarrett Sand Co. (84)	Erie	sand & gravel	4,529	4,529	Ee-29	
Jaymar, Inc. 8751 N. State Route 7 Cheshire, OH 45620 614-992-6637 Jay Hall, Jr., pres.	Jaymar, Inc. (544)	Gallia	sand & gravel	187,735	187,735	Ga-J	IM-1145
Jefferson Materials Co. 8505 State Rte. 14 Streetsboro, OH 44241 216-626-3816 John E. Lower, pres.	Howitt (265)	Portage	sand & gravel	297,498	297,498	Pe-63	IM-82
Jimisco, Inc. P.O. Box 651 Dayton, OH 45449 513-233-7500 James T. McDonald & H. A. Scott, partners	Taylorville Rd. Hardfill (236)	Montgomery	sand & gravel	6,212	6,212	My-55	IM-571
Johnson Rd. Sand & Gravel, Inc. 510 Johnson Rd. Kent, OH 44240 216-673-3396 Robert K. Heimann, pres.	Johnson Rd. Sand & Gravel, Inc. (615)	Portage	sand & gravel	5,905	5,905	Pe-98	IM-1219
John E. Jones Construction Co. 1892 U.S. Route 52 Moscow, OH 45153 513-553-3370 John E. Jones, pres.	John E. Jones Construction Co. (537)	Clermont	sand & gravel	1,531	1,531	Ct-11	IM-665
Jones Sand & Gravel Co. 1516 Timken Rd. Wooster, OH 44691 216-264-1070 Gerald R. & James R. Jones, owners	Jones Sand & Gravel Co. (470)	Holmes	sand & gravel			Hs-J	IM-1043
Joseph Sand & Gravel, Inc. Rte. 6 Boundary Rd. Wapakoneta, OH 45895 419-568-3787 Mary J. Joseph, owner	Joseph Sand & Gravel, Inc. (23)	Auglaize	sand & gravel	6,174	6,174	Ae-23	IM-508
K.C.C.I. P.O. Box 24 Morristown, OH 43759 614-782-1087 George Krulock, pres.	Apex (176)	Jefferson, Harrison	limestone			Jfn-K	IM-1164
R. G. Karg Development Co. 75 Parker Lane Tallmadge, OH 44278 216-633-0470 Richard G. Karg, pres.	R. G. Karg Development Co. (567)	Portage	sand & gravel	11,600	11,600	Pe-K	IM-1148



## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS – Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Karg Sand & Gravel Co. 2088 Congress Lake Rd. Mogadore, OH 44260 216-673-1338 Thomas R. Karg, owner	Karg Sand & Gravel Co. (266)	Portage	sand & gravel	79,250	79,250	Pe-83	IM-179
Keener Sand & Clay Co. 330 Dering Ave. Columbus, OH 43207 614-444-1105 Carl F. Weiffenbach, pres.	Huron Plant (85)	Erie	sand & gravel	485	485	Ee-5	
Keeney Sand & Stone, Inc. 13320 Girdled Rd. Painesville, OH 44077 216-254-4582 Dennis Keeney, pres.	Keeney Sand & Stone, Inc. (60)	Lake	sandstone	60,800	60,800	Lke-K	IM-859
Kellstone, Inc. 3203 Harvard Ave. Newburgh Heights, OH 44105 216-883-7200 James A. Palladino, pres.	Kellstone, Inc. (174)	Erie	limestone	157,125	157,125	Ee-K	IM-727
Kieco Sand & Shale P.O. Box 77 Moxahala, OH 43761 614-342-1594 William Kiener, owner	Kieco Sand & Shale (61) (149)	Perry	sandstone shale			Py-K	IM-851
Kilbarger Construction, Inc. P.O. Box 946 Logan, OH 43138 614-385-6019 Edward Kilbarger, pres.	Kilbarger Construction, Inc. (523)	Hocking	sand & gravel	90	90	Hg-329	IM-1112
Kimble Clay & Limestone Co. 3596 State Route 39 NW Dover, OH 44622-9801 216-343-1226 Floyd E. Kimble, owner	Kimble Clay & Limestone Co. (117) (41) (63) (63)	Tuscarawas	limestone sandstone clay shale	128,962 14,210 43,815	128,962 14,210 117,432	Ts-1818	IM-9
King Limestone, Inc. 53681 Spencer Rd. Cumberland, OH 43732 614-638-3942 Duane King, pres.	King Limestone, Inc. (147)	Guernsey, Muskingum	limestone	227,532	227,532	Gy-309	IM-1030
Kinsman Sand & Gravel Co. P.O. Box 79 Kinsman, OH 44428 216-293-5400 Glenn B. Harnett, pres.	Kinsman Sand & Gravel Co. (11) Kinsman Sand & Gravel Co. (593)	Ashtabula Ashtabula	sand & gravel sand & gravel	6,542 53,322	0 34,765	Asa-17 Asa-K	IM-886 IM-1198
Kipp's Gravel Co., Inc. 4987 State Rte. 222 Batavia, OH 45103 513-732-1024 Melvin M. Kipp, pres.	Kipp's Gravel Co., Inc. (61)	Clermont	sand & gravel	148,562	148,562	Ct-7	IM-432
Kirby's Sand & Gravel, Inc. 4876 County Hwy. 43 Upper Sandusky, OH 43351 419-927-2260 Noble A. Kirby, owner	Kirby's Sand & Gravel, Inc. (382) Kirby's Sand & Gravel, Inc. (591)	Wyandot Wyandot	sand & gravel sand & gravel	58,076 18,103	58,076 18,103	Wt-17 Wt-K	IM-604 IM-943
Kleese Development Associates, Inc. 45 North Rd. Niles, OH 44446 216-652-5991 Robert Kleese, pres.	Kleese Development Associates, Inc. (499)	Trumbull	sand & gravel			Tl-K	IM-1101
Board of Knox County Commissioners 110 East High St. Mt. Vernon, OH 43050 216-397-1590 Gary J. Durbin, engineer	Board of Knox County Commissioners (148)	Knox	shale	9,016	9,016	Kx-K	IM-870
T & K Kuhnle Co. P.O. Box 375 Newbury, OH 44065 216-626-4400 Thomas Kuhnle, pres.	T & K Kuhnle Co. (518)	Geauga	sand & gravel	121,604	121,604	Gea-TK	IM-902

## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS – Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
L & I Natural Resources, Inc. 10369 Cones Rd. Loveland, OH 45140 513-683-2045 Alvin Walker, pres.	L & I Pit & Mill (430)	Warren	sand & gravel	133,626	133,626	Wan-50	IM-1006
L. & M. Excavators, Inc. 6075 Cleveland Ave. #205 Columbus, OH 43231 614-895-1056 Charles L. Lewis, pres.	Westerville Industrial Park (99)	Franklin	sand & gravel			Fn-54	IM-847
L & M Mineral Co. 5205 State Rte. 39 Star Route Millersburg, OH 44654 216-893-2227 John E. Ling, Jr., pres.	Evans (64) Luikert (65) Spring (170) (55) (77) (77) Ramsberg (151)	Tuscarawas Tuscarawas Tuscarawas Tuscarawas Tuscarawas Tuscarawas	shale clay limestone sandstone clay shale shale	5,538 3,931 5,949 20,200 2,975 26,996	5,538 3,931 5,949 20,200 2,975 26,996	Ts-1884 Ts-1914 Ts-1982  Ts-H1	IM-6 D-0701 IM-621  IM-927
Lafarge Corp. Great Lakes Region P.O. Box 160 Paulding, OH 45879 419-399-4861 Michael Rose, pres.	Paulding Quarry (87) (42)	Paulding	limestone clay	667,427 177,656	667,427 177,656	Pg-1	IM-513
Lake Hope Asphalt, Inc. P.O. Box 38 Nelsonville, OH 45764 614-753-1005 Francis Efaw, pres.	Lake Hope Asphalt, Inc. (21)	Athens	sand & gravel	45,632	23,400	As-1161	IM-97
Lakeside Sand & Gravel Co. 3431 Frost Rd. Mantua, OH 44255-9444 216-274-2569 Larry Kotkowski, partner	Lakeside Sand & Gravel Co. (268)	Portage	sand & gravel	249,209	249,209	Pe-40	IM-190
Lancaster Sand & Gravel Co. 3232 Logan-Lancaster Rd. SE Lancaster, OH 43130 614-687-4420 Jerry Mock, foreman	Lancaster Sand & Gravel Co. (92)	Fairfield	sand & gravel	653,220	563,070	Fd-13	IM-848
Larkin Sewer Contractors, Inc. Rte. 3, Box 3932 New Philadelphia, OH 44663 216-339-1289 Thomas E. Larkin, pres.	Larkin Sewer Contractors, Inc. (531)	Tuscarawas	sand & gravel	31,317	0	Ts-L	IM-1125
Latham Limestone, Inc. P.O. Box 77 Latham, OH 45646 614-493-2677 Robert Murray, pres.	Latham Limestone, Inc. (91)	Pike	limestone	316,755	236,500	Pke-13	IM-213
Lazy Acre Farms, Inc. 1030 Forest Ave. Zanesville, OH 43701 614-453-1003 Clarence M. Parsons, owner	Lazy Acre Farms, Inc. (396)	Muskingum	sand & gravel			Mum-261	IM-957
Leetonia Sand & Gravel Co., Inc. P.O. Box 236 Canfield, OH 44406 216-427-1015 Stephen Holowach, pres.	Leetonia Sand & Gravel Co., Inc. (463) (65)	Columbiana	sand & gravel sandstone	13,755 2,289	33,607 2,289	Ca-982	IM-1108
Bertha A. Leonard 6539 River Rd. Harrison, OH 45030 513-738-4194 Bertha A. Leonard, owner	Bertha A. Leonard (137)	Hamilton	sand & gravel	200	200	Hmn-67	IM-529
Lerkis Asphalt Co., Inc. & Subsidiary 550 Dan St. Akron, OH 44310 216-376-7560 Gus J. Lerkis, pres.	Minor Rd. Plant (328) Lerkis Asphalt Co., Inc. & Subsidiary (498)	Summit Summit	sand & gravel sand & gravel	300	300	St-39 St-L	IM-983 IM-1027

## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS — Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Letart Corp. P.O. Box 430 Gallipolis Ferry, WV 25515-0430 304-675-7516 Jon Thompson, pres.	Letart Corp. (559) Letart Corp. (560)	Meigs Meigs	sand & gravel sand & gravel	3,991	3,991	Ms-L Ms-308	IM-1159 IM-1174
Carroll Lifer Excavating, Inc. P.O. Box 308 Bellville, OH 44813 419-886-2548 Ralph W. Robinson, pres.	Honey Creek Sand & Gravel (489)	Richland	sand & gravel	4,499	4,499	Rd-L	IM-1086
Lingvai Peat Co. R.R. 2 01693 Rd. 8 Edgerton, OH 43517 419-298-2058 Ronald Lingvai, owner	Lingvai Peat Co. (4)	Williams	peat	107	0	Ws-17	
London Tile Co. 65 Walnut St. New London, OH 44851 419-929-1551 Sylvia Danison, pres.	Biglow (1)	Ashland	shale	1,252	1,252	Ald-1	IM-334
Loxley Aggregates, Inc. 4277 Falls Rd. Lewisburg, OH 45338 513-839-5488 Matthew L. Loxley, pres.	Loxley Aggregates, Inc. (488) (101)	Preble	sand & gravel clay	8,633 762	6,756 762	Pre-9	IM-1095
Luburgh, Inc. 4090 East Pike Zanesville, OH 43701 614-453-9003 Otto Luburgh, owner	Luburgh Sand Pit (410)	Muskingum	sand & gravel	17,550	17,550	Mum-267	IM-914
Lucky Sand & Gravel Co. 12018 Frost Rd. Mantua, OH 44255 216-562-6196 Bernard Udelson, pres.	Lucky Sand & Gravel Co. (570)	Portage	sand & gravel	109,277	109,277	Pe-L	IM-154
Ludowici-Celadon Co. P.O. Box 69 New Lexington, OH 43764 614-342-1995 Jim Hilyard, pres.	Donnelly Pit (46)	Perry	shale			Py-212	IM-58
M & J Sand & Gravel, Inc. 406 Juliana St. Parkersburg, WV 26101 304-375-9939 Gale Wilson, pres.	M & J Sand & Gravel, Inc. (590) (152)	Washington	sand & gravel shale	10,711	10,711	Wn-M	IM-1163
M & M Builders Supply Co. 5820 Carbon Hill Rd. East Palestine, OH 44413 216-426-9958 Hugh Madden, owner	M & M Builders Supply Co. (47) (106) (106)	Columbiana	sandstone clay shale			Ca-970	IM-1024
M & M Operating 305 Lighthouse Point S.E. New Philadelphia, OH 44663 216-339-4987 Michael Murray, pres.	M & M Operating (142)	Tuscarawas	clay			Ts-MMO	IM-1166
MacRitchie Materials, Inc. P.O. Box 90 West Millgrove, OH 43467 419-288-2790 Donald B. MacRitchie, pres.	MacRitchie Materials, Inc. (130)	Wood	limestone	209,975	209,975	Wd-1	IM-548
Marshall Quarry, Inc. 11199 State Rte. 124 Hillsboro, OH 45133 513-466-2636 Ronald L. Main, pres.	Marshall Quarry, Inc. (43)	Highland	limestone	7,562	7,562	Hd-4	IM-406
Donald Martin Contracting 1875 Roxanna-New Burlington Rd. Waynesville, OH 45068 513-862-4182 Roger J. Martin, owner	Donald Martin Contracting (403)	Greene	sand & gravel	300	300	Ge-40	IM-923



## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS — Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Martin Marietta Magnesia Specialties, Inc. P.O. Box 30800 Raleigh, NC 27622 919-783-4684 Phil Sipling, pres.	Woodville Quarry (102)	Sandusky	limestone	2,701,974	2,701,974	Sy-1	IM-537
Mason's Sand & Gravel Co. 2385 Rathmell Rd. Columbus, OH 43207 614-491-3611 Gordon Masteller, pres.	Mason's Sand & Gravel Co. (100)	Franklin	sand & gravel	77,437	77,437	Fn-11	IM-234
Massillon Materials, Inc. 26 N. Cochran St. P.O. Box 499 Dalton, OH 44618 216-832-4767 Howard J. Wenger, pres.	Massillon Materials, Inc. (495) Massillon Materials, Inc. (580)	Stark Stark	sand & gravel sand & gravel	290,880 126,005	290,880 126,005	Sk-M Sk-MM	IM-1031 IM-752
Massillon Washed Gravel Co. 6331 Blough Ave. SW P.O. Box 167 Navarre, OH 44662 216-879-2132 Thomas E. Thomas, pres.	Massillon Washed Gravel Co. (325) Massillon Washed Gravel Co. (578)	Stark Stark	sand & gravel sand & gravel	263,166	263,166	Sk-607 Sk-MW	IM-102 IM-1171
Maxville Quarries, Inc. 7957 State Rte. 668 S Logan, OH 43138 614-385-7087 David J. McCort, pres.	Maxville Quarries, Inc. (89) Maxville Quarries, Inc. (168)	Perry Perry	limestone limestone	137,300 144,599	145,649 133,444	Py-235 Py-343	IM-11, IM-515 IM-1061
McCarthy Stone Quarry 6326 County Rd. 61 Upper Sandusky, OH 43351 419-294-2611 Charles H. McCarthy, owner	McCarthy Stone Quarry (133)	Wyandot	limestone	207,689	207,689	Wt-3	IM-298
David McCourt Mining Co. R.D. #1 Irondale, OH 43932 614-768-2260 David McCourt, owner	David McCourt Mining Co. (131)	Columbiana	clay			Ca-DM	IM-919
Bill McKeever Excavating 207 Bloomfield Ave. Urbana, OH 43078 513-652-1898 Bill McKeever, owner	Bill McKeever Excavating (536)	Champaign	sand & gravel	1,497	1,497	Cpn-24	IM-1167
Mecco, Inc. 2504 S. Main St. Middletown, OH 45042 513-422-3651 David T. Morgan, pres.	Mecco, Inc. (39)	Butler	sand & gravel	267,612	294,015	Br-15	IM-316
Mechanicsburg Sand & Gravel, Inc. P.O. Box 18 Mechanicsburg, OH 43044 513-834-2606 John D. Cushman, pres.	Mechanicsburg Sand & Gravel, Inc. (50)	Champaign	sand & gravel	234,681	213,553	Cpn-22	IM-889
Meigs County Commissioners Rte. 2 Rocksprings Rd. Pomeroy, OH 45769 614-992-2911 David H. Spencer, office mgr.	Meigs County Pit (211)	Meigs	sand & gravel			Ms-301	IM-619
Melvin Stone Co. 228 Melvin Rd. Wilmington, OH 45177 513-584-2486 Craig Beam, pres.	Melvin Stone Co. (17) Melvin Stone Co. (28) Melvin Stone Co. (92)	Clinton Fayette Pickaway	limestone limestone limestone	1,101,571 115,968 276,955	1,101,571 115,968 276,955	Cln-1 Fe-1 Pky-4	IM-241 IM-831 IM-209
Menuet Bros. Sand & Gravel, Inc. 5366 County Rd. 349 Rte. 1 Millersburg, OH 44654 216-674-4254 Gene Menuet, pres.	Fair Pit (153)	Holmes	sand & gravel	260,286	260,286	Hs-82	IM-707

## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS – Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Mesenburg Bros., Inc. R.D. 1 Collins, OH 44826 419-668-5691 Peter J. Mesenburg, pres.	Mesenburg Bros., Inc. (86) Mesenburg Bros., Inc. (20)	Erie Huron	sand & gravel sandstone	4,066 26,171	4,066 26,171	Ee-24 Hrn-8	IM-915 IM-268
Miami River Stone Co. 1556 Miami River Rd. Sidney, OH 45365 513-492-5412 Bradley Comer, pres.	Miami River Stone Co. (110) Miami River Stone Co. (311)	Shelby Shelby	limestone sand & gravel	273,431 283,678	179,976 283,678	Shy-6 Shy-17	IM-389 IM-389
Mickley Gravel Co. P.O. Box J Danville, OH 43014 614-599-7870 Paul A. Mickley, owner	Mickley Gravel Co. (162)	Knox	sand & gravel	1,720	1,608	Kx-5	IM-884
Midwest Portland Cement Corp. P.O. Box 1531 Zanesville, OH 43701 614-849-2311 John Gilliland, plant mgr.	Lyle Quarry (76) (112) Midwest Portland Cement Corp. (39)	Muskingum Muskingum	limestone shale shale	669,314 38,070	669,314 38,070	Mum-24 Mum-C	IM-830 IM-303
Miller Bros. Construction, Inc. Rte. 1 Box 30 Archbold, OH 43502 419-445-1015 Dale Miller, pres.	Miller Bros. Construction, Inc. (526)	Logan	sand & gravel	4,721	0	Lgn-M	IM-799
Miller Bros. Gravel, Inc. 7900 S. Kessler-Frederick Rd. Tipp City, OH 45371 513-698-7204 Thomas O. Miller, pres.	Miller Bros. Gravel, Inc. (233)	Montgomery	sand & gravel	234,025	202,697	My-52	IM-348
H. M. Miller Construction Co. P.O. Box 131 Mogadore, OH 44260 216-628-4811 J. C. Smith, pres.	Krumroy Pit (330)	Summit	sand & gravel			St-46	IM-557
Miller Sand & Gravel Co. 10228 State Rte. 82 Windham, OH 44288 216-326-3157 Donald M. Miller, owner	Miller Sand & Gravel Co. (272)	Portage	sand & gravel	1,608	402	Pe-39	IM-174
Mitchell Transport, Inc. 35746 Lake Shore Blvd. Eastlake, OH 44094 216-942-9191 Robert Amos, pres.	North Park Reclamation Clay Center (92)	Lake	clay	2,900	2,900	Lke-M	IM-1059
Mohican Organic Products, Inc. Rte. 1, 47 Milligan Rd. Lucas, OH 44843 419-892-2212 Farley & Joyce Amos, owners	Mohican Pit (1)	Ashland	peat			Ald-13	
Moore's Excavating Co. 2222 N. State Rte. 68 Urbana, OH 43078 513-653-6288 Ralph Moore, owner	Moore's Excavating Co. (51) (153)	Champaign	sand & gravel clay	65,312 58	54,312 58	Cpn-20	IM-482
Morrow Gravel Co. 11641 Mosteller Rd. Cincinnati, OH 45241 513-771-0820 James P. Jurgensen, pres.	Morrow Gravel Co. (63) Morrow Gravel Co. (501) Morrow Gravel Co. (502) Morrow Gravel Co. (503)	Mercer Warren Warren Warren	limestone sand & gravel sand & gravel sand & gravel	352,409 2,500	352,409 2,500	Mr-2 Wan-M Wan-M1 Wan-M2	IM-430 IM-728, IM-1065 IM-1051 IM-837
Morton International, Inc. Morton Salt Division P.O. Box 428 Grand River, OH 44045-0428 216-639-4243 Richard L. Wilson, plant mgr.	Fairport Mine (2)	Lake	salt	1,003,605	1,016,301	Lke-6	

## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS — Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Morton International, Inc. Morton Salt Division 151 S. Industrial St. P.O. Box 337 Rittman, OH 44270-0337 216-925-3015 Charles S. Locke, CEO	Morton Salt Well Field (5)	Wayne	salt	484,588	500,620	We-9129	
Muskingum River Gravel Co. P.O. Box 1585 Zanesville, OH 43702-1585 614-453-0624 Larry E. Young, v. pres.	Muskingum River Gravel Co. (152) Muskingum River Gravel Co. (247) Muskingum River Gravel Co. (448) Muskingum River Gravel Co. (452) Plant #2 (367)	Hocking Muskingum Muskingum Ross Washington	sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel	85,000 100,000 71,350 200,000 12,750	85,000 100,000 71,350 200,000 12,750	Hg-301 Mum-228 Mum-262 Rs-M Wn-38	IM-458 IM-421 IM-422 IM-114 IM-701
National Aggregates, Inc. P.O. Box 340 Malvern, OH 44644 216-863-1955 Bill Sheckler, pres.	National Aggregates, Inc. (512) National Aggregates, Inc. (610)	Carroll Stark	sand & gravel sand & gravel	193,591	193,591	Cl-N Sk-NA	IM-641 IM-1186
National Lime & Stone Co. P.O. Box 120 Findlay, OH 45839-0120 419-422-4341 R. W. Kruse, v. pres.	Lima Plant (5) Lima Plant (6) Buckland Plant (11) Wapakoneta Plant (24) Bucyrus Plant (18) Delaware Plant (21) Findlay Plant (149) Marion Plant (60) Carey Plant (134) Upper Sandusky Plant (380) Upper Sandusky Plant (380) Upper Sandusky Plant (381)	Allen Allen Auglaize Auglaize Crawford Delaware Hancock Marion Wyandot Wyandot Wyandot Wyandot	limestone limestone limestone sand & gravel limestone limestone limestone limestone limestone sand & gravel sand & gravel sand & gravel	1,015,628 <sup>4</sup> 457,935 169,696 1,389,470 1,966,211 1,267,383 690,981 3,098,252 <sup>5</sup> 199,766 <sup>5</sup>	970,229  470,870 151,136 1,515,647 2,152,125 1,444,274 662,351 2,981,409  213,121	An-3 An-11 Ae-10 Ae-30 Cd-1 Del-5 Hk-7 Mn-3 Wt-1 Wt-5 Wt-15 Wt-18	IM-484 IM-541 IM-486 IM-598 IM-404 IM-207 IM-1002 IM-168 IM-405 IM-376 IM-376 IM-551
Neer's Sand & Gravel 4859 Twp. Rd. 45 Bellevfontaine, OH 43311 513-585-6733 Arden J. Neer, Sr., owner	Neer's Sand & Gravel (189)	Logan	sand & gravel	145,581	199,814	Lgn-6	IM-459
Nelson Sand & Gravel, Inc. P.O. Box 466 Kingsville, OH 44048 216-224-0198 Thomas H. Nelson, pres.	Nelson Sand & Gravel, Inc. (14) Nelson Sand & Gravel, Inc. (510)	Ashtabula Ashtabula	sand & gravel sand & gravel	12,650	12,650	Asa-12 Asa-N	IM-1130 IM-1109
Nelson Transfer, Inc. 7685 Fields-Ertel Rd. Cincinnati, OH 45247 513-489-0871 Charles R. Nelson, v. pres.	Nelson Transfer, Inc. (520)	Hamilton	sand & gravel			Hmn-C	IM-1132
Newbury Sand & Gravel 15365 Ravenna Rd. Burton, OH 44021 216-834-8500 Blaine M. Kaufman, owner	Newbury Sand & Gravel (517) (50)	Geauga	sand & gravel sandstone	9,864 24,953	9,864 32,853	Gea-N	IM-1123
New Carlisle Sand & Gravel Co. 6090 S. Scarff Rd. New Carlisle, OH 45344 513-845-0696 Willard Lee Upton, owner	New Carlisle Sand & Gravel Co. (217)	Miami	sand & gravel	1,267	1,267	Mi-501	
Newton Asphalt Paving, Inc. P.O. Box 86 Strasburg, OH 44680 216-878-5648 G. A. Gessner & C. T. Newton, partners	516 (428)	Tuscarawas	sand & gravel	100,506	100,506	Ts-2001	IM-1004
Nick's Trucking 14228 Madison Rd. Middlefield, OH 44062 216-632-1949 Nick R. Loze, owner	Nick's Trucking (584)	Trumbull	sand & gravel	8,489	8,489	TI-N	IM-1158

<sup>4</sup>Information for An-11 is reported under An-3.<sup>5</sup>Information for Wt-5 and Wt-18 is reported under Wt-15.



## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS — Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Northern Ohio Materials, Inc. 8300 State Rte. 14 Streetsboro, OH 44241 216-626-5577 Roger Schuck, operations mgr.	Northern Ohio Materials, Inc. (273)	Portage	sand & gravel	319,116	317,293	Pe-85	IM-700
Northern Ohio Paving Co. 1750 Highland Rd. Twinsburg, OH 44087 216-425-7861 Walter H. Edwards, pres.	Northern Ohio Paving Co. (316)	Stark	sand & gravel	208,867	208,867	Sk-N	IM-156
Northmont Sand & Gravel Co. P.O. Box 185 Englewood, OH 45322 513-836-1998 Robert D. Eyre, pres.	Northmont Sand & Gravel Co. (235)	Montgomery	sand & gravel	2,770	391	My-49	IM-370
North Shore Stone Quarries, Inc. 72 Fernhill Ave. Columbus, OH 43228 614-878-0620 Clifford Hammond, pres.	North Shore Stone Quarries, Inc. (109)	Seneca	limestone	6,636	6,636	Sa-8	IM-313
Northwood Stone & Asphalt Co. 1558 County Rd. 105 Belle Center, OH 43310 513-464-3833 Don E. Mill, pres.	Northwood Stone & Asphalt Co. (51) Rockhold Division (119)	Logan Union	limestone limestone	340,280 150,483	296,320 117,584	Lgn-2 Un-1	IM-494 IM-208
Nutter Bros. Coal Co., Inc. P.O. Box 248 New Straitsville, OH 43766 614-394-2681 James P. Nutter, pres.	Nutter Bros. Coal Co., Inc. (98)	Perry	clay	38,718	38,718	Py-N	IM-1097
Carl E. Oeder & Sons Sand & Gravel 3890 Turtlecreek Rd. Lebanon, OH 45036 513-494-1238 Carl E. Oeder, pres.	Carl E. Oeder & Sons Sand & Gravel (352)	Warren	sand & gravel	456,329	456,329	Wan-41 <sup>6</sup>	IM-629
Ohio Asphaltic Limestone Corp. 8591 Mad River Rd. Hillsboro, OH 45133 513-364-2191 W. C. Mason, pres.	Ohio Asphaltic Limestone Corp. (42)	Highland	limestone	356,993	304,060	Hd-3	IM-253
Ohio Bulk Transfer Co. 3203 Harvard Rd. Newburg Heights, OH 44105 216-883-7200 James Palladino, pres.	Ohio Bulk Transfer Co. (68)	Summit	sandstone			St-60	IM-1206
Olen Corp. 4755 S. High St. Columbus, OH 43207-4028 614-491-1515 Wayne Rayburn, pres.	Hilliard Plant #1 (102) (154) Columbus Plant #3 (465) Fredericktown Plant #2 (161) Olen Corp. (555)	Franklin Franklin Knox Knox	sand & gravel limestone sand & gravel sand & gravel sand & gravel	95,447 448,571 1,783,112 464,383	31,396 424,757 1,819,546 529,239	Fn-43 Fn-58 Kx-16 Kx-OC	IM-188 IM-1023 IM-793 IM-930
Oneida Sand & Gravel, Inc. 8000 Blade Rd. NW Malvern, OH 44644 216-343-6831 Louis H. Smitley, pres.	Oneida Sand & Gravel, Inc. (47)	Carroll	sand & gravel	87,137	96,056	Cl-204	IM-554
Osborne Materials Co. P.O. Box 248 Grand River, OH 44045-0248 216-357-5562 Harold T. Larned, pres.	Osborne Materials Co. (2)	Lake Erie	sand & gravel (dredged)	109,597	109,597	Lke-D	
Oster Sand & Gravel, Inc. 5947 Whippel Ave. NW North Canton, OH 44720-7692 216-494-5472 Marlene K. Oster, pres.	Massillon Plant (326) Boliwar Plant (342) Oster Sand & Gravel, Inc. (586)	Stark Tuscarawas Tuscarawas	sand & gravel sand & gravel sand & gravel	468,778 58,898 57,661	468,778 58,898 57,661	Sk-165 Ts-1852 Ts-2036	IM-192, IM-781 IM-75 IM-1155

<sup>6</sup>See also Dravo Basic Materials Co., Inc.

## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS — Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Ours Sand & Gravel 20444 State Rte. 7 South Crown City, OH 45623 614-256-1378 Donald & Gloria Ours, owners	Ours Sand & Gravel (466)	Gallia	sand & gravel	7,058	7,058	Ga-O	IM-1028
P. & D. Sons, Inc. P.O. Box 163 Oak Hill, OH 45656 614-682-7769 Paul D. Cherrington, Jr., pres.	P. & D. & Sons, Inc. (575)	Ross	sand & gravel			Rs-P	IM-122
R. H. Penick Co. 1504 Blue Jay Rd. Heath, OH 43056 614-323-3040 R. H. Penick, owner	R. H. Penick Co. (3)	Licking	salt	10,531	10,531	Lg-45	
Penn Eagle Coal Corp. P.O. Box 151 Wellsburg, WV 26070 304-737-0696 Alan K. Worthley, pres.	B & S Mine (554) (59) (133)	Jefferson	sand & gravel sandstone clay	805 853 43,823	805 853 43,823	Jfn-PE	IM-1162
Penry Stone Co. P.O. Box 176 Radnor, OH 43066 614-595-3373 Walter Penry, owner	Radnor Plant (23) Penry Stone Co. (198)	Delaware Marion	limestone sand & gravel	336,915 54,292	336,915 54,292	Del-2 Mn-4	IM-299 IM-290
Phillips Sand & Gravel U.S. Rte. 35 Box 187 Alpha, OH 45301 513-426-5461 George E. Phillips, pres.	Phillips Sand & Gravel (115)	Greene	sand & gravel	471,506	470,786	Ge-36	IM-305
Piqua Materials, Inc. Piqua Minerals Division 1750 W. Statler Rd. Piqua, OH 45356 513-773-4824 Albert R. Donovan, mgr.	Piqua Minerals Division (64)	Miami	limestone	343,288	345,845	Mi-1	IM-382
C. F. Poeppelman, Inc. 4755 N. State Rte. 721 Bradford, OH 45308 513-448-2191 James Poeppelman, pres.	C. F. Poeppelman, Inc. (67)	Miami	limestone	331,767	331,767	Mi-10	IM-335
Portage Lakes Sand & Gravel Co. 2800 N. Turkeyfoot Rd. Akron, OH 44319 216-644-2285 Douglas K. Rennick, pres.	Portage Lakes Sand & Gravel Co. (384)	Summit	sand & gravel	178,690	178,690	St-53	IM-874
Prairie Lane Sand & Gravel Co. 4401 Prairie Lane Rd. Wooster, OH 44691 216-262-6821 Ralph W. Miller, Jr., pres.	Prairie Lane Sand & Gravel Co. (372)	Wayne	sand & gravel	171,049	171,049	We-11	IM-547
Precision Aggregate, Inc. 12205 E. Gypsy Lane Rd. Bowling Green, OH 43402 419-352-4681 Randy G. Schmeltz, pres.	Precision Aggregate, Inc. (183) Precision Aggregate, Inc. (379)	Wood Wyandot	limestone sand & gravel	50,689	128,777	Wd-14 Wt-4	IM-1157 IM-520
Premier Services Corp. 901 E. Eighth Ave. King of Prussia, PA 19406 215-337-1100 P.E. Kinsey, pres.	Premier Services Corp. (106)	Seneca	limestone	183,467	183,467	Sa-2	IM-352
Puskarich Limestone, Inc. P.O. Box 207 Sherrrodsville, OH 44675 614-269-3481 Nick Puskarich, pres.	Harlem Springs (15)	Carroll	limestone			Cl-183	IM-7
Putnam Stone Co. R.R. 1, 7053 Road M Ottawa, OH 45875-9754 419-523-6004 James E. Shroyer, pres.	Putnam Stone Co. (98)	Putnam	limestone	316,422	502,172	Pm-2	IM-570

## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS – Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Quality Ready Mix, Inc. R.R. 5 Wapakoneta, OH 45895 419-738-2817 Robert E. Hirschfeld, pres.	Quality Pit (25)	Auglaize	sand & gravel	53,213	53,213	Ae-16	IM-595
Quality Stone Co. 8751 N. State Rte. 7 Cheshire, OH 45620 614-992-6637 Jay Hall, Jr., pres.	Quality Stone Co. (148) Route 32 (182)	Vinton Vinton	limestone limestone	31,820 487,900	31,830 487,900	Vn-190 Vn-193	D-0761
Quarry Trails 7500 S. Cassel Rd. P.O. Box 520 Vandalia, OH 45377 513-667-4431 John E. Moyer, Jr., co-owner	Quarry Trails (178)	Montgomery	limestone	150	0	My-Q	IM-860
R & S, Inc. 7522 Wales Rd. NW North Canton, OH 44720 216-499-1024 Garry R. Ross, pres.	Copley Sand & Gravel (427)	Summit	sand & gravel	26,558	26,558	St-54	IM-934
Rack Sand, Inc. 5175 Este Ave. Cincinnati, OH 45232 513-242-5052 Roy Schweitzer, owner	Rack Sand, Inc. (139)	Hamilton	sand & gravel	16,518	16,518	Hmn-10	IM-226
Rainbow Sand & Gravel, Inc. 9500 Elliman Rd. Mantua, OH 44255 216-562-4701 Bernard Udelson & Jeremy Samson, owners	Rainbow Sand & Gravel, Inc. (280)	Portage	sand & gravel	93,698	93,698	Pe-64	IM-1017
John P. Raisch, Inc. P.O. Box 93 Miamisburg, OH 45342 513-866-3094 John P. Raisch, owner	John P. Raisch, Inc. (562)	Montgomery	sand & gravel	5,900	5,900	My-R	IM-539
Rash Energy, Inc. 3114 U.S. Route 62 Dundee, OH 44624 216-359-5909 Freeman Mullet, pres.	Rash Energy, Inc. (69) Rash Energy, Inc. (64) (144) (144)	Wayne Wayne	sandstone sandstone clay shale	24,000 24,000	24,000 24,000	We-26 We-R	IM-1210 IM-690
Red Brush Peat Co. 6945 Red Brush Rd. Ravenna, OH 44326 216-297-0923 Barbara H. Linger, owner	Red Brush Peat Co. (482) (116) (9)	Portage	sand & gravel clay peat	1,123 734 2,827	1,123 734 2,827	Pe-61	IM-1064
Redland Ohio, Inc. 128 E. Main St. Woodville, OH 43469 419-849-2321 Ian McGregor, pres.	Millersville Plant (103) Woodville Plant (104)	Sandusky Sandusky	limestone limestone	1,481,708 <sup>7</sup>	1,609,819	Sy-4 Sy-3	IM-381 IM-282
Richards & Son, Inc. 49947 State Rte. 338 Racine, OH 45771 614-247-2311 Dennis R. Taylor, v. pres.	Richards & Son, Inc. (212)	Meigs	sand & gravel	541,709	541,709	Ms-298	IM-32
Richards Farms, Inc. 24537 Canal Rd. Circleville, OH 43113 614-474-3602 Bruce S. Richards, pres.	Richards Farms, Inc. (481) Richards Farms, Inc. (604)	Pickaway Pickaway	sand & gravel sand & gravel	24,409	24,409	Pky-R Pky-R1	IM-993 IM-992
Richards Service Garage 2170 Wilberforce-Clifton Rd. Xenia, OH 45385 513-372-8263 Roger Richards, owner	Richards Service Garage (547)	Greene	sand & gravel	50	50	Ge-R	IM-829

<sup>7</sup>Information for Sy-4 is reported under Sy-3.



## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS — Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Richland Moulded Brick Co. 1000 Richland Shale Rd. P.O. Box 1711 Mansfield, OH 44901 419-524-0000 Dudley P. Frame, Jr., pres.	Richland Moulded Brick Co. (114)	Richland	shale	6,785	6,785	Rd-R	IM-1035
Ridge Township Quarry 16905 Middlepoint Rd. Van Wert, OH 45891 419-238-2533 Jenny Lautenschleger, foreman	Ridge Township Quarry (122)	Van Wert	limestone	69,669	69,669	Vt-7	IM-642
Ries Sand & Gravel 169 State Rte. 95 Jeromesville, OH 44840 419-368-7833 Robert Ries, owner	Ries Sand & Gravel (6)	Ashland	sand & gravel	1,144	1,144	Ald-9	IM-745
Riverside Sand & Gravel Co., Inc. P.O. Box 324 Tallmadge, OH 44278-0324 216-673-2021 A. H. Acken, Jr., pres.	Riverside Sand & Gravel Co., Inc. (333) (49)	Summit	sand & gravel sandstone	22,497 3,165	22,497 3,165	St-24	IM-239
Gary Roberts Excavating 570 Derby Downs Rd. Newark, OH 43055 614-763-3206 Gary L. Roberts, owner	Gary Roberts Excavating (419)	Licking	sand & gravel	1,830	1,830	Lg-504	IM-991
Rogers Group, Inc. dba Norwalk Sand & Gravel P.O. Box 338 Sandusky, OH 44871-0338 419-625-8493 Frank Warren, CEO	Norwalk Sand & Gravel (157)	Huron	sand & gravel	235,058	235,058	Hrn-1	IM-550
Rogers Group, Inc. dba Sandusky Crushed Stone Co. P.O. Box 338 Sandusky, OH 44871-0338 419-625-8493 Frank Warren, CEO	Sandusky Crushed Stone Co. (25)	Erie	limestone	4,006,293	4,006,293	Ee-11	IM-263
Jim Romig Excavating 8084 Dawn Rd. Sherrodsville, OH 44675 614-269-1225 James Romig, owner	Jim Romig Excavating (153)	Coshocton	limestone	2,000	2,000	Cn-A	IM-1011
Ross County Gravel Co. P.O. Box 158 Sabina, OH 45169-0158 513-584-2486 Craig Beam, pres.	Ross County Gravel Co. (530)	Ross	sand & gravel	179,591	179,591	Rs-R	IM-1143
Ross County Redi-Mix Co., Inc. 689 Marietta Rd. Chillicothe, OH 45601 614-775-4466 Todd Wrightsel, v. pres.	Ross County Redi-Mix Co., Inc. (574)	Ross	sand & gravel			Rs-RC	IM-925
Rubber City Sand & Gravel Co. P.O. Box 106 Uniontown, OH 44685 216-699-3311 William H. Leach, Sr., owner	Rubber City Sand & Gravel Co. (334)	Summit	sand & gravel	194,418	179,101	St-9	IM-167
Rubel Quarry, Inc. 35479 State Rte. 78 Lewisville, OH 43754 614-567-3217 Randy Rubel, pres.	Rubel Quarry, Inc. (164)	Monroe	limestone	25,528	25,528	Me-509	IM-1094
Rupp Construction, Inc. 18228 Fulton Rd. Marshallville, OH 44645 216-855-2781 J. P. Radabaugh, pres.	Rupp Construction, Inc. (581) Rupp Construction, Inc. (373)	Stark Wayne	sand & gravel sand & gravel	77,917 269,907	51,386 247,644	Sk-R We-7	IM-697 IM-471

## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS — Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
S. K. Construction Co. 2514 Atco Ave. Middletown, OH 45042 513-424-1613 H. R. Smith, pres.	Ron Chrisman Farm (120)	Butler	clay	88,711	88,711	Br-56	IM-1137
S & S Aggregate, Inc. P.O. Box 1585 Zanesville, OH 43702-1585 614-453-0624 Larry E. Young, v. pres.	Plant #1 (101) Plant #13 (159) Twin Lakes Sand, Inc. (281) Twin Lakes Sand, Inc. (282) Twin Lakes Sand, Inc. (336)	Franklin Knox Portage Portage Summit	sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel	175,000 142,770 125,000 50,000 105,000	175,000 142,770 125,000 50,000 105,000	Fn-24 Kx-13 Pe-59 Pe-67 St-44	IM-266 IM-343 IM-210 IM-202 IM-178
G. M. Sader Excavating & Paving, Inc. P.O. Box 306 Bowling Green, OH 43402 419-352-5113 Gregory M. Sader, pres.	G. M. Sader Excavating & Paving, Inc. (456) (104)	Wood	sand & gravel clay	8,783	8,783	Wd-13	IM-998
Salt Creek Materials, Inc. 880 Spry Rd. Zanesville, OH 43701 614-872-3860 Charles O. Lighthizer, owner	Salt Creek Materials, Inc. (248) Salt Creek Materials, Inc. (144)	Muskingum Muskingum	sand & gravel limestone	739 17,534	0 17,534	Mum-216 Mum-269	IM-689 IM-1009
Samco, Inc. 10217 State Rte. 534 N Middlefield, OH 44062 216-272-5158 J. Jim Holmes, pres.	Springbrook (340)	Ashtabula, Trumbull	sand & gravel	389,040	389,040	TL-12 <sup>a</sup>	IM-131
Sandkuhl Tile Co., Inc. 05536 Kossuth-Amanda Rd. Spencerville, OH 45887 419-647-4131 Leslie E. Sandkuhl, pres.	Sandkuhl Tile Co., Inc. (2)	Auglaize	clay	5,830	5,830	Ae-7	
Sandman Sand & Stone, Inc. 8840 Geiser Rd. Holland, OH 43528 419-875-6380 Robert Parker, pres.	Road 1 (542) Archbold-Whitehouse Pit (556)	Fulton Lucas	sand & gravel sand & gravel	96,810 52,334	96,810 52,334	Ftn-S Ls-MH	IM-1146 IM-1144
Sands Hill Coal Co., Inc. 1203 N. Pennsylvania Ave. Wellston, OH 45692 614-384-5659 Bonny A. Huffman, pres.	Sands Hill Strip #4 (158)	Jackson	limestone	237,197	237,197	Jkn-SH	IM-1068
Sant Sand & Gravel, Inc. P.O. Box 750 Mt. Vernon, OH 43050 614-397-0000 Keith L. Sant, pres.	Sant Sand & Gravel, Inc. (163)	Knox	sand & gravel	113,907	75,060	Kx-3	IM-300
Michael B. Sayers P.O. Box 515 Put-in-Bay, OH 43456-0515 419-285-2260 Michael B. Sayers, owner	Michael B. Sayers (516)	Delaware	sand & gravel			Del-S	IM-1118
Guy Schieve P.O. Box 83 Birmingham, OH 44816 216-965-8792 Guy Schieve, owner	Guy Schieve (191)	Lorain	sand & gravel	4,925	4,925	Ln-12	IM-731
Schilling Contractors, Inc. Rte. 2 Box 326 Ironton, OH 45638 614-532-8463 Earl P. Schilling, pres.	Schilling Contractors, Inc. (305)	Scioto	sand & gravel			So-78	
Schloss Materials Co. 13700 McCracken Rd. Cleveland, OH 44125 216-587-4900 Raymond E. Schloss, Sr., pres.	Schloss Materials Co. (274) Schloss Materials Co. (569)	Portage Portage	sand & gravel sand & gravel	121,995	121,995	Pe-60 Pe-SP	IM-78 IM-499

<sup>a</sup>All sales and production are from Trumbull County.

## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS — Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Schrader Sand & Gravel 601 Gravel Washer Rd. Beaver, OH 45613 614-226-1325 Melvin Schrader, owner	Schrader Sand & Gravel (45)	Pike	sandstone	37,377	42,092	Pke-31	IM-835
Scioto Sand & Gravel P.O. Box 31 Marion, OH 43301-0031 614-494-2177 Gerald E. Fleming, pres.	Scioto Sand & Gravel (197)	Marion	sand & gravel	3,926	3,926	Mn-16	IM-171
Scioto Valley Resources P.O. Box 760 Lucasville, OH 45648 513-393-4211 John B. Patton, pres.	Scioto Valley Resources Division (395)	Scioto	sand & gravel	434,616	437,198	So-100	IM-950
Seaway Sand & Stone, Inc. 2190 Whitehouse-Spencer Rd. Swanton, OH 43558 419-865-5751 Stacy M. Moon, pres.	Seaway Sand & Stone, Inc. (188) (195) (156)	Lucas	limestone sand & gravel clay	46,872 169,113 178	46,872 169,113 178	Ls-13	IM-492
	Stone Oaks (473)	Lucas	sand & gravel	19,888	19,888	Ls-SS	IM-1069
Sam Serves 2267 Springfield Center Rd. Akron, OH 44312 216-644-9815 Sam Serves, pres.	Sam Serves (583)	Summit	sand & gravel			St-S	IM-722
Seville Sand & Gravel, Inc. 8215 Seville Rd. Seville, OH 44273 216-948-1812 George Cross, pres.	Seville Sand & Gravel, Inc. (206)	Medina	sand & gravel	358,937	358,937	Ma-22	IM-425, IM-650, IM-651
Shamrock Materials, Inc. 11641 Mosteller Rd. Cincinnati, OH 45241 513-771-0820 James P. Jurgensen, pres.	Shamrock Materials, Inc. (38)	Butler	sand & gravel			Br-52	IM-814
Sharon Stone Co. P.O. Box 100 Dexter City, OH 45727 614-783-3575 John P. McCort, pres.	Sharon Stone Co. (167)	Noble	limestone	104,242	104,242	Ne-S	IM-913
R. W. Sidley, Inc. 615 W. Main St. Conneaut, OH 44030 216-298-3232 Robert C. Sidley, pres.	Conneaut Pit (15)	Ashtabula	sand & gravel	96,500	96,500	Asa-15	IM-783
R. W. Sidley, Inc. 7123 Madison Rd. Thompson, OH 44086 216-298-3232 Robert C. Sidley, pres.	Thompson Pit (18) R. W. Sidley, Inc. (58) Painesville Pit (166)	Geauga Geauga Lake	sandstone sandstone sand & gravel	318,000 325 19,800	318,000 325 19,800	Gea-1 Gea-S Lke-7	IM-163 IM-161 IM-162
Sidney Sand & Gravel Co. P.O. Box 379 Sidney, OH 45365 513-492-3125 Thomas P. Milligan, pres.	Milligan & Milligan-Washington Twp. Pit (312) Rock Run Quarry (111) Wagner (493) Staley Pit (577)	Shelby Shelby Shelby Shelby	sand & gravel limestone sand & gravel sand & gravel	191,562 64,937 31,428	191,562 64,937 31,428	Shy-13 Shy-16 Shy-S Shy-SS	IM-412 IM-411 IM-1005 IM-438
Sidwell Bros., Inc. 4620 Limestone Valley Rd. Zanesville, OH 43701 614-849-2392 Dale R. Sidwell, pres.	Stonehill Quarry (146) Sidwell Quarry (78) Sidwell Bros., Inc. (186) Hard Rocks (40)	Coshocton Muskingum Muskingum Trumbull	limestone limestone limestone sandstone	103,812 615,054 794	103,812 615,054 794	Cn-830 Mum-104 Mum-SB Tl-13	IM-1102 IM-277 IM-1212 IM-777
Silchuk Gravel Co. 2470 Wall Rd. Rittman, OH 44270 216-336-8796 Junior F. Silchuk, owner	Silchuk Gravel Co. (208)	Medina	sand & gravel			Ma-16	
Simak Trucking, Inc. 3052 E. Center St. P.O. Box 599 North Kingsville, OH 44068 216-224-1009 Joseph E. Simak, pres.	Simak Trucking, Inc. (413)	Ashtabula	sand & gravel	53,169	53,169	Asa-18	IM-949



## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS – Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Slankard Dozer Service, Inc. Rte. 1 Box 49 Strasburg, OH 44680 216-878-5883 Jerry L. Slankard, pres.	Beach City Pit (54)	Tuscarawas	sandstone	1,940	1,940	Ts-2032	IM-1141
Small's Sand & Gravel, Inc. P.O. Box 617 Gambier, OH 43022 614-427-4096 Michael Small, pres.	Small's Sand & Gravel, Inc. (165) Small's Sand & Gravel, Inc. (408)	Knox Knox	sand & gravel sand & gravel	76,108 142,742	76,108 142,742	Kx-15 Kx-17	IM-967 IM-968
Sober Sand & Gravel Co. 2898 Tallmadge Rd. Ravenna, OH 44266 216-325-7013 Waldo A. Sober, agent	Sober Sand & Gravel Co. (275)	Portage	sand & gravel	300	0	Pe-18	IM-193
Soehnl Bros. Sand & Gravel, Inc. 10449 Soehnl Rd. NW Beach City, OH 44608 216-756-2244 Francis L. Soehnl, pres.	Soehnl Bros. Sand & Gravel, Inc. (343)	Tuscarawas	sand & gravel	99,632	83,900	Ts-1826	IM-88
Solomon's Mines, Inc. 7732 Salem-Unity Rd. Salem, OH 44460 216-332-0123 Jack Solomon, owner	Solomon's Mines, Inc. (196) (135)	Mahoning	sand & gravel clay	37,723 7,605	37,723 7,605	Mg-632	IM-808
Solon Excavators Sand & Gravel, Inc. 10925 Mantua Center Rd. P.O. Box Q Mantua, OH 44255 216-274-8241 Howard Sargent, pres.	Trethewey (443) Solon Excavators Sand & Gravel, Inc. (276) Solon Excavators Sand & Gravel, Inc. (486)	Geauga Portage Portage	sand & gravel sand & gravel sand & gravel	119,682 211,113	119,682 211,113	Gea-40 Pe-36 Pe-SE	IM-977 IM-90 IM-1096
Soltis Sand & Gravel 19102 Nelson Ledge Rd. Garrettsville, OH 44231 216-548-5813 James W. Soltis, owner	Soltis Sand & Gravel (415) (86)	Geauga	sand & gravel clay	2,968 334	2,968 334	Gea-9	IM-132
Southern Ohio Aggregates, Inc. 11641 Mosteller Rd. Cincinnati, OH 43113 513-771-0820 James P. Jurgensen, pres.	Southern Ohio Aggregates, Inc. (460) Southern Ohio Aggregates, Inc. (551) Southern Ohio Aggregates, Inc. (552) Southern Ohio Aggregates, Inc. (284)	Butler Hamilton Hamilton Preble	sand & gravel sand & gravel sand & gravel sand & gravel	2,000 1,000 1,500 2,500	2,000 1,000 1,500 2,500	Br-S Hmn-S Hmn-SO Pre-7	IM-1053 IM-746 IM-720 IM-306
Southern Ohio Sand & Gravel, Inc. 9336 Dick Rd. Harrison, OH 45030 513-353-9014 David Welsh, pres.	Southern Ohio Sand & Gravel, Inc. (134)	Hamilton	sand & gravel	231,091	231,091	Hmn-71	IM-771
Southern Silica, Inc. P.O. Box 22 Richmond Dale, OH 45673 614-884-4721 George W. Cannon, Jr., pres.	Southern Silica, Inc. (34)	Ross	sandstone	174,071	174,071	Rs-16	IM-172
Southwestern Portland Cement Co. Eastern Division 506 E. Xenia Rd. P.O. Box 191 Fairborn, OH 45324 513-878-8651 Clarence Comer, pres.	Southwestern Portland Cement Co. (33) Southwestern Portland Cement Co. (10) Southwestern Portland Cement Co. (34) Harner (90) Southwestern Portland Cement Co. (72)	Clark, Greene Greene Greene Greene Montgomery	limestone clay limestone clay limestone	272,329 293,791	272,329 293,791	Ge-1 Ge-8 Ge-9 Ge-44 My-58	IM-393 IM-364 IM-364 IM-330
Speer Brothers, Inc. 3812 Old Railroad Rd. Sandusky, OH 44870 419-626-5291 David Speer, pres.	101 Location (89)	Erie	clay			Ee-32	IM-1077
Sphagnum Moss Peat Farm 9904 State Route 736 Plain City, OH 43064 513-465-6765 Mike Poling, owner	Sphagnum Moss Peat Farm (2)	Champaign	peat	13,157	6,460	Cpn-9	

## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS – Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Spring Creek Corp. 4723 Hardin-Wapak Rd. Sidney, OH 45365 513-492-4186 Nelson E. Barhorst, pres.	Pence Deposit (314) River Quarry (112) Jones Deposit (315) "H" Mine	Shelby Shelby Shelby Shelby	sand & gravel limestone sand & gravel sand & gravel	52,169 266,158 308,850 26,000	52,169 266,158 308,850 26,000	Shy-11 Shy-15 Shy-18 Shy-SC	IM-743 IM-387 IM-388 IM-1018
Spring Industries, Inc. P.O. Box 507 New Philadelphia, OH 44663 216-339-3585 Glenn Straub, pres.	Bolivar Pit (582) Midvale Pit (344) Hardy Salt (588)	Stark Tuscarawas Tuscarawas	sand & gravel sand & gravel sand & gravel	245,129 21,768	289,100 0	Sk-SI Ts-1771 Ts-SI	IM-588 IM-77 IM-569
Spring Valley Investments, Inc. 2800 N. Turkeyfoot Rd. Akron, OH 44319 216-644-2285 Douglas K. Rennick, pres.	Spring Valley Investments, Inc. (335)	Summit	sand & gravel			St-26	IM-803
City of Springfield 201 Eagle City Rd. Springfield, OH 45502 513-390-7210 Mark Ricketts, water plant maintenance supervisor	City of Springfield (437)	Clark	sand & gravel	13,000	13,000	Ck-7	IM-449
Springfield Sand & Gravel Co. 4301 S. Charleston Pike Springfield, OH 45502 513-325-7386 Don E. Mill, pres.	Springfield Sand & Gravel Co. (58)	Clark	sand & gravel	443,181	443,181	Ck-25	IM-358
Standard Lafarge 6715 Tippecanoe Rd. Bldg. C Canfield, OH 44406 216-533-3338 Jeffrey A. Lewis, sr. v. pres.	Adams (2) Marblehead (84) Cutlip (255) Shalersville (277) Shalersville Portable (278) Mantua (487) Haverhill (306) Navarre (453)	Adams Ottawa Pike Portage Portage Portage Scioto Stark	limestone limestone sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel	521,798 2,611,943 193,113 833,585 5,721 335,008	469,691 3,007,433 174,300 780,803 5,721 408,113	Ads-6 Oa-7 Pke-24 Pe-68 Pe-SS1 Pe-SS2 So-79 Sk-241	IM-659 IM-440 IM-222 IM-687, IM-1107 IM-660, IM-1124 IM-1047 IM-221 IM-582
State Line Resources, Inc. Route 154 Negley, OH 44441 216-426-2728 Charles H. Muse, Jr., pres.	State Line Resources, Inc. (4) (4)	Columbiana	clay shale	39,554	39,554	Ca-505	IM-13, IM-936
Stewart & Reichman, Inc. 1866 State Rte. 416 SE Gnadenhutten, OH 44629 614-922-5898 Timothy G. Brown, pres.	Stewart & Reichman, Inc. (346)	Tuscarawas	sand & gravel	60,716	60,716	Ts-111	IM-55
Stillwater Sand & Gravel, Inc. 7850 Karns Rd. West Milton, OH 45383 513-698-3028 Ed Bohse, pres.	Stillwater Sand & Gravel, Inc. (447)	Miami	sand & gravel	179,736	179,736	Mi-504	IM-1032
Stocker Sand & Gravel Co. P.O. Box 176 Gnadenhutten, OH 44629 614-254-4635 William E. Stocker, pres.	Stocker Sand & Gravel Co. (347) Stocker Sand & Gravel Co. (348)	Tuscarawas Tuscarawas	sand & gravel sand & gravel	359,196 506,902	359,196 506,902	Ts-69 Ts-125	IM-51 IM-50
Stoneco, Inc. 1345 Ford St. P.O. Box 29A Maumee, OH 43537 419-893-8731 John Bearss, pres.	Maumee Quarry (54) Celina Quarry (62) Rocky Ridge (83) Auglaize Quarry (88) Scott Quarry (121) South Montpelier (375) North Montpelier (376) Takacs Quarry (506) Lime City Quarry (131) Portage Quarry (132)	Lucas Mercer Ottawa Paulding Van Wert Williams Williams Williams Wood Wood	limestone limestone limestone limestone limestone sand & gravel sand & gravel sand & gravel limestone limestone	731,456 495,368 142,241 596,204 246,788 256,583 256,583 653,367 334,604	731,456 495,368 142,241 596,204 246,788 256,583 256,583 653,367 334,604	Ls-2 Mr-1 Oa-14 Pg-2 Vt-3 Ws-6 Ws-9 Ws-T Wd-6 Wd-11	IM-503 IM-592 IM-320 IM-481 IM-495 IM-497 IM-498 IM-1022 IM-480 IM-475
Stone Creek Brick Co. P.O. Box 116 Stone Creek, OH 43840 216-339-5511 A. C. Marsh, Jr., pres.	Stone Creek Clay Mine (67) Stone Creek Shale Pit (67)	Tuscarawas Tuscarawas	clay shale	32,077 4,477	32,077 4,477	Ts-1557 Ts-1558	IM-52 IM-52

## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS – Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Stonehill Quarry, Inc. 27341 State Route 79 Warsaw, OH 43844 614-849-2392 Dale R. Sidwell, pres.	Stonehill Quarry, Inc. (594)	Coshocton	sand & gravel			Cn-SQ	IM-1185
Suever Stone Co., Inc. State Route 697 P.O. Box 338 Delphos, OH 45833 419-692-0931 Carl Suever, pres.	Suever Stone Co., Inc. (7) Delphos Quarry (123)	Allen Van Wert	limestone limestone	114,490 163,848	97,355 175,791	An-4 Vt-1	IM-491 IM-500
Sugarcreek Clay & Limestone, Inc. P.O. Box 402 Sugarcreek, OH 44681 216-852-4440 Daniel O. Miller, pres.	Newcomerstown Plant (72) Sugarcreek Clay & Limestone, Inc. (118) Sugarcreek Clay & Limestone, Inc. (69) (69)	Coshocton Tuscarawas	sand & gravel limestone clay shale	66,165	60,594	Cn-624 Ts-1928	IM-243 IM-98
Summitville Tiles, Inc. P.O. Box 173 Summitville, OH 43962 216-223-1511 David Johnson, pres.	Summitville Tiles, Inc. (5) Summitville Tiles, Inc. (127)	Columbiana Columbiana	shale shale	20,663 10,757	20,663 10,757	Ca-205 Ca-989	IM-74 IM-1110
Sunshine Sand Co. 8861 State Rte. 43 Kent, OH 44240 216-587-2700 Margaret A. Bova, pres.	Sunshine Sand Co. (528)	Portage	sand & gravel	1,250	1,250	Pe-SSC	IM-318
Swingle Drilling, Inc. 713 Keystone St. Crooksville, OH 43731 614-982-8420 James R. Swingle, pres.	T. G. Industries, Inc. (138)	Perry	clay	3,240	3,240	Py-S1	IM-1183
Tackett Builders 906 Charleston Pike Chillicothe, OH 45601 614-772-5431 Carmel G. Tackett, owner	Tackett Builders (606) (150)	Ross	sand & gravel shale	453	453	Rs-T	IM-1189
Teague Gravel Co., Inc. 10924 Kinsman Rd. Newbury, OH 44065 216-564-5671 Donald Teague, pres.	Teague Gravel Pit (109)	Geauga	sand & gravel	74,232	74,232	Gea-35	IM-321
Don Thompson Excavating, Inc. 1471 W. Paintersville Rd. Spring Valley, OH 45370 513-862-7911 Todd Thompson, pres.	Don Thompson Excavating, Inc. (546)	Greene	sand & gravel			Ge-46	IM-1149
Thompson Mining Co. dba Pleasant Valley Limestone 12321 Ideal Rd. Byesville, OH 43723 614-685-6726 George V. Thompson, pres.	Pleasant Valley Limestone (185)	Muskingum	limestone			Mum-907	IM-1200
Tipp Stone Co., Inc. P.O. Box 367 Troy, OH 45373 513-228-8423 T. L. Eidemiller, pres.	Troy (446) Meeker (238)	Miami Montgomery	sand & gravel sand & gravel	6,966 96,385	6,966 96,385	Mi-12 My-61	IM-467 IM-468
Towne Square Products 156 E. Broadway Westerville, OH 43081 614-882-6990 Suzanne Edgar, pres.	Towne Square Products (41)	Noble	shale	425	425	Ne-66	IM-664
Tri-County Limestone Co. 4664 Hardin-Marion Rd. N Kenton, OH 43326 419-675-7127 Norman Cochran, pres.	Tri-County Limestone Co. (61)	Marion	limestone	233,381	233,381	Mn-1	IM-250



## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS – Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Tri-State Asphalt Productions 44 Sixteenth St. Wheeling, WV 26003 304-233-1110 Glenn Straub, pres.	Tri-State Asphalt Productions (26)	Belmont	sand & gravel	267,346	268,956	Bt-74	IM-288
Tri-State Clay & Coal Co., Inc. P.O. Box 135 Hitchins, KY 41146-0135 606-474-5525 Tom Parsons, pres.	Tri-State Clay & Coal Co., Inc. (134)	Lawrence	clay			Le-T	IM-1172
Trout Sand & Gravel Co. Rte. 4 Marietta, OH 45750 800-344-4948 Henry C. Trout, Jr., owner	Trout Sand & Gravel Co. (369)	Washington	sand & gravel	47,966	47,966	Wn-510	IM-25
Tuffco Sand & Gravel, Inc. P.O. Box 399 Marysville, OH 43040 614-873-3977 Charles Lewis, pres.	Tuffco Sand & Gravel, Inc. (474)	Madison	sand & gravel	126,110	89,200	Mdn-11	IM-1063
U.S. Silica Co. 701 Boyce Memorial Dr. Ottawa, IL 61350 815-434-0188 Richard E. Goodell, pres.	Coxey Works (42)	Tuscarawas	sandstone	16,348	16,348	Ts-1660	IM-68
Union Aggregates Co. 8328 Watkins Rd. P.O. Box 178 Ostrander, OH 43061 614-666-2013 Don E. Mill, pres.	Prospect Sand & Gravel Plant (200) Union Limestone Plant (120)	Marion Union	sand & gravel limestone	42,809 765,268	35,371 765,268	Mn-10 Un-2	IM-196 IM-236
United Builders Distributing Corp. 24371 State Rte. 30 E. Rochester, OH 44625 216-894-2394 Roger McDaniel, pres.	United Builders Distributing Corp. (464)	Columbiana	sand & gravel			Ca-U	IM-999
V.I.P. Contractors, Inc. 475 Morman Rd. Hamilton, OH 45013 513-863-7272 James E. Broshear, pres.	V.I.P. Contractors, Inc. (28)	Butler	sand & gravel			Br-36	IM-649
Valley Materials Co. 4947 U.S. Rte. 23 South P.O. Box 400 Piketon, OH 45661 614-289-4400 Ralph McFann, pres.	Valley Materials Co. (252) (99)	Pike	sand & gravel clay	79,560	79,560	Pke-26	IM-142
Valley Clay Mining Co. 26 N. Shawnee Ave. Zanesville, OH 43701 614-452-3633 F. Klemm Ungemach III, pres.	Kimpel Mine (122)	Muskingum	clay	7,339	3,169	Mum-904	IM-1127
Van Wey Sand & Gravel, Inc. 6824 Mt. Vernon Rd. NE Newark, OH 43055 614-745-5965 Richard L. Van Wey, pres.	Van Wey Sand & Gravel, Inc. (179)	Licking	sand & gravel	442,108	482,850	Lg-10	IM-217
Wagner Quarries Co. 4203 Milan Rd. Sandusky, OH 44870 419-625-8141 Stephen C. Lochner, pres.	Wagner Quarries Co. (26)	Erie	limestone	1,541,240	1,516,751	Ee-1	IM-310
Ralph C. Wagner & Sons 7317 Brinker St. Navarre, OH 44662 216-879-2516 Ralph C. Wagner, owner	Ralph C. Wagner & Sons (579)	Stark	sand & gravel	50	50	Sk-W	IM-867

## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS – Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Walker Trucking & Excavating Co. P.O. Box 795 Alexandria, OH 43001 614-924-6342 Richard A. Walker, owner	Walker Trucking & Excavating Co. (600)	Licking	sand & gravel			Lg-W	IM-1213
Wallace Rd. Sand & Gravel P.O. Box 74 Petersburg, OH 44454 216-542-3696 David Sugar, pres.	Wallace Rd. Sand & Gravel (475)	Mahoning	sand & gravel	28,134	28,134	Mg-630	IM-1091
Waller Bros. Stone Co. P.O. Box 157 McDermott, OH 45652 614-259-2356 F. L. Waller, pres.	Inskeep Quarry (36) Crabtree Quarry (37) Miller Quarry (38)	Scioto Scioto Scioto	sandstone sandstone sandstone	4,264 9,217	4,264 9,217	So-48 So-76 So-82	IM-140 IM-141 IM-158
Tommie G. Walters 1676 County Rd. D Swanton, OH 43558 419-825-3192 Tommie G. Walters, pres.	Tommie G. Walters (543)	Fulton	sand & gravel	105	105	Ftn-6	IM-1175
Walter's Gravel 11302 National Rd. SE Thornville, OH 43076 614-323-0783 Viva W. Fenice, owner	Walter's Gravel (180)	Licking	sand & gravel			Lg-15	
Ward Materials, Inc. 385 Oak St. R.R. 2 Leipsic, OH 45856 419-943-2450 Arnold W. Rosebrock, pres.	Ward Materials, Inc. (2)	Allen	sand & gravel	49,141	50,641	An-15	IM-721
Don Wartko Construction, Inc. 975 Tallmadge Rd. Kent, OH 44240 216-673-5252 Donald Wartko, pres.	Don Wartko Construction, Inc. (483)	Portage	sand & gravel	847	847	Pe-92	IM-522
Waste Management of Ohio, Inc. 3619 Gracemont St. SE East Sparta, OH 44626 216-874-3855 Greg A. Terwilliger, site mgr.	Countywide RDF (126) (126)	Stark	clay shale	45,350	45,350	Sk-217	IM-750
Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 614-682-7787 Phil A. Bowman, v. pres.	Waterloo-Zoar Quarry (47) (23)	Jackson	limestone clay	508,586 2,510	498,696 2,510	Jkn-367	IM-774
Watson Gravel, Inc. 2728 Hamilton-Cleves Rd. P.O. Box 277 Ross, OH 45061 513-863-0070 Ronald E. Watson, pres.	Watson Pit (44) Spring Valley (441) Harrison Pit (142) Mason Pit (363)	Butler Greene Hamilton Warren	sand & gravel sand & gravel sand & gravel sand & gravel	569,864 500,512 583,416 300	569,864 500,512 583,416 300	Br-47 Ge-38 Hmn-60 Wan-10	IM-111 IM-333 IM-761 IM-465
Weber Aggregates P.O. Box 116 Reedsville, OH 45772 614-378-6293 Denver Weber, owner	Weber Aggregates (459)	Athens	sand & gravel	11,995	11,995	As-W	IM-979
Weber Sand & Gravel, Inc. Rte. 2 Box 3 Bryan, OH 43506 419-636-7920 Thomas G. Weber, pres.	Weber Sand & Gravel, Inc. (377)	Defiance, Williams	sand & gravel	254,225	254,225	Ws-11 <sup>9</sup>	IM-509, IM-661
Hoyle Weddle 2419 U.S. Route 68 N Yellow Springs, OH 45387 513-374-1234 Hoyle Weddle, owner	Hoyle Weddle (549)	Greene	sand & gravel			Ge-W	IM-645

<sup>9</sup>All sales and production are from Williams County.

## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS — Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Weidle Sand & Gravel, Inc. P.O. Box 247 Germantown, OH 45327 513-855-2228 Ronald L. Weidle, Sr., pres.	Weidle Sand & Gravel, Inc. (41) Weidle Sand & Gravel, Inc. (239) Weidle Sand & Gravel, Inc. (158)	Butler Montgomery Montgomery	sand & gravel sand & gravel clay	119,107 209,234 143,464	119,107 209,234 143,464	Br-6 My-41 My-W	IM-177 IM-360 IM-1207
Welch Sand & Gravel, Inc. 10217 Columbia St. Harrison, OH 45030-9751 513-353-3220 Charles H. Welch, pres.	Schlichter Pit (45) Fernald Pit (143) East Miami Pit (144)	Butler Hamilton Hamilton	sand & gravel sand & gravel sand & gravel	90,803 382,594 271,633	90,803 382,594 271,633	Br-38 Hmn-42 Hmn-48	IM-218 IM-823 IM-220
Brush Wellman, Inc. 14710 W. Portage River South Rd. Elmore, OH 43416-9502 419-862-2745 Andy Sandor, v. pres., operations	Brush Wellman Clay Mine (136)	Ottawa	clay	62,000	62,000	Oa-BW	IM-1153
White Eagle Mining, Inc. P.O. Box 2 Pedro, OH 45659 614-533-2234 William Shope, Jr., pres.	White Eagle Mining, Inc. (121)	Lawrence	clay			Le-445	IM-1140
White Rock Quarry, L.P. Division of U.S. Aggregates, Inc. P.O. Box 119 Clay Center, OH 43408-0119 419-855-8388 Robert Simpson, pres.	White Rock Quarry (82)	Ottawa	limestone	422,136	449,742	Oa-6	IM-296
Frank Widmor Coal Co. P.O. Box 176 Blaine, OH 43909 614-635-4811 Frank Widmor, owner	Bellaire Stone (152) (56) (105) (105)	Belmont	limestone sandstone clay shale	239,837 7,524 7,072 35,620	239,837 7,524 7,072 37,139	Bt-1190	IM-1089
Mark Williams Blacktop Co., Inc. Rte. 4 Box 34 Marietta, OH 45750 614-373-2457 Mark Williams, owner	Williams Pit #1 (504) Williams Pit #2 (534)	Washington Washington	sand & gravel sand & gravel	39,013	72,778	Wn-1007 Wn-1009	IM-1042 IM-525
Willowbrook 39130 Brookfield St. Lisbon, OH 44432 216-424-7493 Ray Perrino, owner	Willowbrook (538)	Columbiana	sand & gravel	1,172	1,172	Ca-993	IM-1180
Eugene T. Wilson P.O. Box 46 Mt. Sterling, OH 43143 614-877-4743 Eugene Wilson, owner	Eugene T. Wilson (565)	Pickaway	sand & gravel	1,610	1,610	Pky-W	IM-1176
Dennis Winzeler Center St. Rte. 4 Box 4 Bryan, OH 43506 419-636-4285 Dennis & Polly Winzeler, owners	Dennis Winzeler (378)	Williams	sand & gravel			Ws-14	IM-614
Wise Gravel 8535 W. Klinger Rd. Covington, OH 45318 513-473-3246 John A. Wise, owner	Wise Gravel (221)	Miami	sand & gravel	2,933	413	Mi-9	IM-408
Wyandot Dolomite, Inc. P.O. Box 126 Carey, OH 43316-0126 419-396-7641 David J. Wolfe, pres.	Wyandot Dolomite, Inc. (135)	Wyandot	limestone	1,417,216	1,737,481	Wt-8	IM-273
Wysong Gravel Co. P.O. Box 5 West Alexandria, OH 45381 513-962-2559 Gerald E. Wysong, pres.	Camden Plant (285) West Alexandria Plant (286)	Preble Preble	sand & gravel sand & gravel	200,098 104,377	200,098 104,377	Pre-4 Pre-6	IM-477 IM-478



## 1993 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS – Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1993 sales (tons)	1993 production (tons)	State mine number	Division of Reclamation permit number
Wysong Stone Co. 5897 State Rte. 503 N P.O. Box 159 Lewisburg, OH 45338 513-962-2559 Gerald E. Wysong, pres.	Wysong Stone Co. (95)	Preble	limestone	64,682	64,682	Pre-5	IM-447
X L Sand & Gravel P.O. Box 157 Negley, OH 44441 216-426-9876 Robert Lansberry, pres.	X L Sand & Gravel (68)	Columbiana	sand & gravel	68,200	68,200	Ca-881	IM-611
Xenia Sand, Gravel, & Asphalt Co. 588 Dayton-Xenia Rd. Xenia, OH 45385 513-372-2978 David A. Thompson, owner	Xenia Sand, Gravel, & Asphalt Co. (117)	Greene	sand & gravel	1,575	735	Ge-10	IM-518
York Road Gravel Co. 8819 York Rd. SW Pataskala, OH 43062 614-927-2821 Jack & Jean Klima, owners	York Road Gravel Co. (181)	Licking	sand & gravel	71,025	71,025	Lg-38	IM-695
Young's Sand & Gravel Co. 689 State Rte. 39 W P.O. Box 117 Loudonville, OH 44842 419-994-3040 Milton, Marion, & Delmar Young, partners	Sprang (8) Young's Sand & Gravel Co. (412)	Ashland Ashland	sand & gravel sand & gravel	141,310 196,387	141,310 196,387	Ald-7 Ald-15	IM-392 IM-944
Zerger's Quarry 100 N. Sycamore St. Woodsfield, OH 43793 614-472-1675 Herman Zerger, owner	Zerger's Quarry (80)	Monroe, Noble	limestone	1,958	1,958	Ne-86 <sup>10</sup>	IM-70
Zink Petroleum Corp. dba State Rte. 416 Sand & Gravel 1530 Corporate Woods Pky. Suite 200 Uniontown, OH 44685 216-492-2854 Jeffrey E. Zink, pres.	State Rte. 416 Sand & Gravel (500)	Tuscarawas	sand & gravel	215,318	195,242	Ts-2018	IM-1076
Zoar Mining Co. P.O. Box 550 Zoar, OH 44697 216-874-2434 David W. Johnson, pres.	Zoar Mining Co. (71) (71)	Tuscarawas	clay shale	1,082	1,082	Ts-540	IM-28
Zollinger Sand & Gravel Co. 11899 Easton Rd. Rittman, OH 44270 216-855-2464 Carl Zollinger, pres.	Zollinger Sand & Gravel Co. (374)	Wayne	sand & gravel	111,018	111,018	We-15	IM-398

<sup>10</sup> All sales and production are from Noble County.



Science teachers learning about the geology of the Devonian-age Columbus and Delaware Limestones at the American Aggregates Corporation Columbus Limestone quarry. Photo taken during the 1993 Ohio's Mineral Industries Teachers Workshop.

## 1993 LIMESTONE/DOLOMITE COMPANIES WITH SALES OR PRODUCTION

Company	No. of operations	Sales (tons)	Production (tons)	Company	No. of operations	Sales (tons)	Production (tons)
American Aggregates Corp.	13	7,647,848	6,987,031	National Lime & Stone Co.	8	9,885,860	10,196,905
Ayers Limestone Quarry, Inc.	1	84,963	84,963	North Shore Stone Quarries, Inc.	1	6,636	6,636
Barrett Paving Materials, Inc.	1	226,853	226,853	Northwood Stone & Asphalt Co.	2	490,763	413,904
Belden Brick Co.	1	35,710	35,710	Ohio Asphaltic Limestone Corp.	1	356,993	304,060
Belville Mining Co., Inc.	1	88,211	90,747	Olen Corp.	1	448,571	424,757
Black Gold Recovery, Inc.	1	34,518	34,518	Penry Stone Co.	1	336,915	336,915
Bluffton Stone Co.	1	305,950	305,950	Piqua Materials, Inc.	1	343,288	345,845
Blum Mining Co.	1	39,731	33,628	C. F. Poeppelman, Inc.	1	331,767	331,767
Central Ohio Coal Co.	1	161,744	161,744	Premier Services Corp.	1	183,467	183,467
Chesterhill Stone Co.	1	638,186	626,371	Putnam Stone Co.	1	316,422	502,172
Christman Quarry	1	77,468	77,468	Quality Stone Co.	2	519,720	519,720
Con-Ag, Inc.	1	210,743	226,230	Quarry Trails	1	150	0
Davon, Inc.	2	2,275,597	2,323,335	Redland Ohio, Inc.	2	1,481,708	1,600,819
Dravo Basic Materials Co., Inc.	1	35,884	189,870	Ridge Township Quarry	1	69,669	69,669
C. E. Duff & Son, Inc.	1	308,915	308,915	Rogers Group, Inc., dba Sandusky Crushed Stone Co.	1	4,006,293	4,006,293
E.M.A.I. Corp.	3	2,464,236	2,464,236	Jim Romig Excavating	1	2,000	2,000
R. A. Eberts Co., Inc.	1	262,552	276,573	Rubel Quarry, Inc.	1	25,528	25,528
Erie Blacktop, Inc.	1	76,771	218,795	Salt Creek Materials, Inc.	1	17,534	17,534
Fox Stone Products, Inc.	1	8,000	8,000	Sands Hill Coal Co., Inc.	1	237,197	237,197
The France Stone Co.	6	4,370,954	5,091,284	Seaway Sand & Stone, Inc.	1	46,872	46,872
GenLime Group, L.P.	1	637,190	363,593	Sharon Stone Co.	1	104,242	104,242
Gotttron Bros. Co.	1	89,249	73,797	Sidney Sand & Gravel Co.	1	64,937	64,937
J. M. Hamilton & Sons Co., Inc.	1	112,692	112,692	Sidwell Bros., Inc.	2	718,866	718,866
Hardin Quarry Co., Inc.	1	180,211	180,211	Southwestern Portland Cement Co.	2	566,120	566,120
Holmes Limestone Co.	1	109,658	109,658	Spring Creek Corp.	1	266,158	266,158
Honey Creek Stone Co.	1	172,958	189,740	Standard LaFarge	2	3,133,741	3,477,134
Kellstone, Inc.	1	157,125	157,125	Stonoco, Inc.	7	3,200,028	3,200,028
Kimble Clay & Limestone Co.	1	128,962	128,962	Suever Stone Co., Inc.	2	278,338	273,146
King Limestone, Inc.	1	227,532	227,532	Sugarcreek Clay & Limestone, Inc.	1	66,165	60,594
L & M Mineral Co.	1	3,931	3,931	Tri-County Limestone Co.	1	233,381	233,381
Lafarge Corp.	1	667,427	667,427	Union Aggregates Co.	1	765,268	765,268
Latham Limestone, Inc.	1	316,755	236,500	Wagner Quarries Co.	1	1,541,240	1,516,751
MacRitchie Materials, Inc.	1	209,975	209,975	Waterloo Coal Co., Inc.	1	508,586	498,696
Marshall Quarry, Inc.	1	7,562	7,562	White Rock Quarry, L.P., Division of U.S. Aggregates, Inc.	1	422,136	449,742
Martin Marietta Magnesia Specialties, Inc.	1	2,701,974	2,701,974	Frank Widmor Coal Co.	1	239,837	239,837
Maxville Quarries, Inc.	2	281,899	279,093	Wyandot Dolomite, Inc.	1	1,417,216	1,737,481
McCarthy Stone Quarry	1	207,689	207,689	Wysong Stone Co.	1	64,682	64,682
Melvin Stone Co.	3	1,494,494	1,494,494	Zerger's Quarry	1	1,958	1,958
Miami River Stone Co.	1	273,431	179,976				
Midwest Portland Cement Corp.	1	669,314	669,314	TOTAL: 78 companies	121	60,705,114	61,784,547



## 1993 OHIO DIRECTORY OF LIMESTONE/DOLOMITE MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

For those mines for which the Division of Mines has not assigned a state mine number, a letter designation is used (example: Cn-A).

County	Name of operator	Name of mine or quarry	Township	Geological unit	Type and principal use	State mine number
Adams	Davon, Inc.	Plum Run Stone Division	Meigs	Peebles, Greenfield, & Tymochtee Dolomites (Silurian)	crushed stone — unspecified	Ads-1
	Standard Lafarge	Adams	Franklin	Niagara dolomite (Silurian)	crushed stone — riprap, portland cement concrete, asphaltic concrete, road construction/resurfacing, commercial building	Ads-6
Allen	Bluffton Stone Co.	Bluffton Stone Co.	Richland	Tymochtee Dolomite (Silurian)	unspecified	An-1
	National Lime & Stone Co.	Lima Plant	Bath	Silurian	crushed stone — riprap, commercial building, railroad ballast	An-3 <sup>1</sup>
Athens Auglaize	Suever Stone Co., Inc.	Suever Stone Co., Inc.	Spencer	Tymochtee Dolomite (Silurian)	crushed stone — asphaltic concrete, road construction/resurfacing, commercial building, driveway use; aglime	An-4
	R. A. Eberts Co., Inc.	Diamond Stone	Lee		crushed stone — unspecified	As-533
Belmont	Con-Ag, Inc.	Con-Ag, Inc.	Noble	Cedarville Dolomite (Silurian)	crushed stone — riprap, asphaltic concrete, road construction/resurfacing; aglime	Ae-31
	National Lime & Stone Co.	Buckland Plant	Moulton	Silurian	crushed stone — riprap, commercial building; aglime	Ae-10
Clark Clinton	Ayers Limestone Quarry, Inc.	Ayers Limestone Quarry, Inc.	Pease	Permian	crushed stone — riprap, road construction/resurfacing	Bt-716
	Black Gold Recovery, Inc.	Black Gold Recovery Limestone	Richland	Fishpot limestone (Pennsylvanian)	crushed stone — road construction/resurfacing, commercial building	Bt-1192
Coshocton	Frank Widmor Coal Co.	Bellaire Stone	Pultney		crushed stone — riprap	Bt-1190
	American Aggregates Corp.	Springfield #423	Springfield	Cedarville Dolomite (Silurian)	crushed stone — road construction/resurfacing	Ck-1
Crawford	Melvin Stone Co.	Melvin Stone Co.	Richland	Guelph Dolomite (Silurian)	crushed stone — riprap, portland cement concrete, asphaltic concrete, road construction/resurfacing, commercial building, residential/farm use; aglime	Cln-1
	Jim Romig Excavating	Jim Romig Excavating	White Eyes		crushed stone — unspecified	Cn-A
Darke Delaware	Sidwell Bros., Inc. (dba Stonehill Quarry, Inc.)	Stonehill Quarry	Bedford, Perry	Putnam Hill limestone (Pennsylvanian)	crushed stone — road construction/resurfacing	Cn-830
	National Lime & Stone Co.	Bucyrus Plant	Holmes	Devonian	crushed stone — riprap, flux stone, commercial building, railroad ballast, extenders, fillers; aglime	Cd-1
Erie	American Aggregates Corp.	Fort Jefferson #424	Butler	Cedarville Dolomite (Silurian)	crushed stone — road construction/resurfacing	Dke-1
	American Aggregates Corp.	Shawnee #225	Concord	Columbus & Delaware Limestones (Devonian)	crushed stone — road construction/resurfacing	Del-4
Erie	National Lime & Stone Co.	Delaware Stone #227	Scioto	Columbus Limestone (Devonian)	crushed stone — road construction/resurfacing	Del-3
	Penry Stone Co.	Delaware Plant	Scioto	Columbus & Delaware Limestones (Devonian)	crushed stone — riprap, commercial building, railroad ballast; aglime	Del-5
Erie	Erie Blacktop, Inc.	Radnor Plant	Radnor	Columbus & Delaware Limestones (Devonian)	unspecified	Del-2
	Erie Blacktop, Inc.	Erie Blacktop Quarry	Margaretta		crushed stone — riprap, portland cement concrete, asphaltic concrete, road construction/resurfacing	Ee-27

<sup>1</sup>Information for An-3 includes information for An-11.

## 1993 OHIO DIRECTORY OF LIMESTONE/DOLOMITE MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY — Continued

County	Name of operator	Name of mine or quarry	Township	Geological unit	Type and principal use	State mine number
Erie (cont.)	Kellstone, Inc.	Kellstone, Inc.	Kelleys Island		crushed stone — riprap, road construction/resurfacing	Ee-K
	Rogers Group, Inc. (dba Sandusky Crushed Stone Co.)	Sandusky Crushed Stone Co.	Groton	Columbus & Delaware Limestones (Devonian)	crushed stone — riprap, portland cement concrete, asphaltic concrete, road construction/resurfacing, commercial building, railroad ballast, landscape use, fill; aglime; stone sand, stone concrete blocks, stone septic tanks	Ee-11
	Wagner Quarries Co.	Wagner Quarries Co.	Perkins	upper Columbus & Delaware Limestones (Devonian)	crushed stone — road construction/resurfacing, railroad ballast	Ee-1
Fayette	American Aggregates Corp.	Blue Rock Limestone #427	Perry	Tymochtee Dolomite (Silurian)	crushed stone — road construction/resurfacing	Fe-2
	Melvin Stone Co.	Melvin Stone Co.	Green	Tymochtee Dolomite (Silurian)	crushed stone — road construction/resurfacing; commercial building, residential/farm use, aglime	Fe-1
Franklin	American Aggregates Corp.	Columbus Limestone #221	Franklin, Jackson, Marion	Columbus Limestone (Devonian)	crushed stone — road construction/resurfacing	Fn-53
		Marble Cliff #224	Norwich	Columbus & Delaware Limestones (Devonian)	crushed stone — road construction/resurfacing	Fn-2
	Olen Corp.	Hilliard Plant #1	Brown	Salina Dolomite (Silurian)	crushed stone — riprap, road construction/resurfacing, commercial building	Fn-43
Greene	American Aggregates Corp.	Cedarville Limestone #425	Cedarville	Cedarville Dolomite (Silurian)	crushed stone — road construction/resurfacing	Ge-17
		Fairborn Limestone #431	Sugar Creek	Cedarville Dolomite (Silurian)	crushed stone — road construction/resurfacing	Ge-25
	Southwestern Portland Cement Co.	Southwestern Portland Cement Co.	Bath	upper Brassfield Limestone (Silurian)	stone for portland cement manufacture	Ge-9
Guernsey	King Limestone, Inc.	King Limestone, Inc.	Spencer	Fishpot limestone (Pennsylvanian)	crushed stone — road construction/resurfacing	Gy-309 <sup>2</sup>
	National Lime & Stone Co.	Findlay Plant	Liberty	Niagara dolomite (Silurian)	crushed stone — riprap, commercial building, railroad ballast; aglime	Hk-7
Hardin	Hardin Quarry Co., Inc.	Hardin Quarry Co., Inc.	Pleasant	Tymochtee Dolomite (Silurian)	crushed stone — riprap, road construction/resurfacing, commercial building; aglime	Hdn-2
Highland	Davon, Inc.	Highland Stone Division	Hamer	Brassfield & Dayton Limestones (Silurian)	crushed stone — unspecified	Hd-2
	Dravo Basic Materials Co., Inc.	Lynchburg Plant	Union		crushed stone — road construction/resurfacing	Hd-D
Holmes	Marshall Quarry, Inc.	Marshall Quarry, Inc.	Marshall		crushed stone — road construction/resurfacing; aglime; unspecified	Hd-4
	Ohio Asphaltic Limestone Corp.	Ohio Asphaltic Limestone Corp.	Union		crushed stone — riprap, asphaltic concrete, road construction/resurfacing; aglime	Hd-3
Jackson	Holmes Limestone Co.	241 Plant	Hardy	Putnam Hill limestone (Pennsylvanian)	crushed stone — road construction/resurfacing	Hs-67
	Sands Hill Coal Co., Inc.	Sands Hill Strip #4	Milton		crushed stone — road construction/resurfacing; aglime	Jkn-SH
Lawrence	Waterloo Coal Co., Inc.	Waterloo-Zoar Quarry	Bloomfield, Madison	Vanport limestone (Pennsylvanian)	crushed stone — unspecified	Jkn-367
	Belville Mining Co., Inc.	Belville Mining Co., Inc.	Washington	Vanport limestone (Pennsylvanian)	crushed stone — riprap, road construction/resurfacing, commercial building, unspecified	Le-B
Logan	American Aggregates Corp.	East Liberty #226	Perry		crushed stone — road construction/resurfacing	Lgn-1
	C. E. Duff & Son, Inc.	C. E. Duff & Son, Inc.	Richland		crushed stone — riprap, portland cement concrete, road construction/resurfacing, commercial building	Lgn-15

Lucas	Northwood Stone & Asphalt Co.	Northwood Stone & Asphalt Co.	Richland	Tymochtee Dolomite (Silurian)	crushed stone — riprap, asphaltic concrete, road construction/resurfacing	Lgn-2
	E.M.A.I. Corp. (dba ESSROC Materials, Inc.)	ESSROC Materials, Inc.	Sylvania		crushed stone — unspecified	Ls-12
	The France Stone Co.	Sylvania	Sylvania	Detroit River Group (Devonian)	crushed stone — road construction/resurfacing	Ls-3
	Seaway Sand & Stone, Inc.	Waterville	Waterville	Tymochtee Dolomite (Silurian)	crushed stone — road construction/resurfacing	Ls-1
	Stoneco, Inc.	Seaway Sand & Stone, Inc.	Swanton		crushed stone — riprap, road construction/resurfacing, commercial building	Ls-13
Mahoning		Maumee Quarry	Waynesfield		crushed stone — riprap, portland cement concrete, asphaltic concrete, road construction/resurfacing, commercial building, other; aglime	Ls-2
	Blum Mining Co.	Blum Mining Co.	Springfield	Vanport limestone (Pennsylvanian)	crushed stone — road construction/resurfacing, unspecified	Mg-829
	E.M.A.I. Corp. (dba ESSROC Materials, Inc.)	Bessemer Pit	Poland	Vanport limestone (Pennsylvanian)	crushed stone — unspecified	Mg-608
	Honey Creek Stone Co.	Carbon Pit	Poland		crushed stone — unspecified	Mg-EM
	J.M. Hamilton & Sons Co., Inc.	Honey Creek Stone Co.	Springfield	Vanport limestone (Pennsylvanian)	crushed stone — asphaltic concrete, unspecified	Mg-54
Marion		J.M. Hamilton & Sons Co., Inc.	Marion		crushed stone — asphaltic concrete, road construction/resurfacing	Mn-2
	National Lime & Stone Co.	Marion Plant	Grand Prairie, Marion	Columbus & Delaware Limestones (Devonian)	crushed stone — riprap, commercial building, railroad ballast; aglime	Mn-3
	Tri-County Limestone Co.	Tri-County Limestone Co.	Grand	Niagaran dolomite (Silurian)	crushed stone — riprap, portland cement concrete, road construction/resurfacing, dog/horse runs; aglime	Mn-1
	Stoneco, Inc.	Celina Quarry	Jefferson	Niagaran dolomite (Silurian)	crushed stone — riprap, portland cement concrete, asphaltic concrete, road construction/resurfacing, commercial building, railroad ballast, other; aglime	Mr-1
	Barrett Paving Materials, Inc.	Gregory Quarry	Union	Brassfield Limestone (Silurian)	crushed stone — road construction/resurfacing	Mi-502
Miami	Piqua Materials, Inc.	Piqua Minerals Division	Springcreek	Brassfield Limestone, Dayton & Laurel Dolomites (Silurian)	crushed stone — riprap, flux stone, road construction/resurfacing, industrial fillers; aglime	Mi-1
	C. F. Poeppelman, Inc.	C. F. Poeppelman, Inc.	Newberry	Cedarville Dolomite (Silurian)	crushed stone — riprap, portland cement concrete, asphaltic concrete, road construction/resurfacing; aglime	Mi-10
	Christman Quarry	Christman Quarry	Seneca		crushed stone — unspecified	Me-C
	Rubel Quarry, Inc.	Rubel Quarry, Inc.	Seneca		crushed stone — unspecified	Me-509
	American Aggregates Corp.	Phillipsburg Limestone #421	Clay	Cedarville Dolomite (Silurian)	crushed stone — road construction/resurfacing	My-1
Montgomery		Dayton Limestone #420	Madison	Cedarville Dolomite (Silurian)	crushed stone — road construction/resurfacing	My-23
		Huber Heights Limestone #432	Van Buren	Cedarville Dolomite (Silurian)	crushed stone — road construction/resurfacing	My-32
	Quarry Trails	Quarry Trails	Madison		crushed stone — landscape use	My-Q
	Southwestern Portland Cement Co.	Southwestern Portland Cement Co.	Wayne	Brassfield Limestone (Silurian)	stone for portland cement manufacture	My-58
	Central Ohio Coal Co.	Coal Hill	Meigs	Benwood Limestone (Pennsylvanian)	crushed stone — road construction/resurfacing	Ne-C
Muskingum	Chesterhill Stone Co.	Plant #1	Newton	Maxville Limestone (Mississippian)	crushed stone — riprap, portland cement concrete, asphaltic concrete, road construction/resurfacing, commercial building, railroad ballast, other; stone for portland cement manufacture; aglime	Mum-106

\*See also Muskingum County.



## 1993 OHIO DIRECTORY OF LIMESTONE/DOLOMITE MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY — Continued

County	Name of operator	Name of mine or quarry	Township	Geological unit	Type and principal use	State mine number
Muskie (cont.)	King Limestone, Inc.	King Limestone, Inc.	Rich Hill	Fishpot limestone (Pennsylvanian)	crushed stone — road construction/resurfacing	Gy-309 <sup>3</sup>
	Midwest Portland Cement Corp.	Lyle Quarry	Newton		stone for portland cement manufacture	Mum-24
	Salt Creek Materials, Inc.	Salt Creek Materials, Inc.	Perry		crushed stone — road construction/resurfacing	Mum-269
	Sidwell Bros., Inc.	Sidwell Quarry	Newton	Maxville Limestone (Mississippian)	crushed stone — road construction/resurfacing	Mum-104
	Sharon Stone Co.	Sharon Stone Co.	Noble	Fishpot limestone (Pennsylvanian)	crushed stone — road construction/resurfacing	Ne-S
	Zerger's Quarry	Zerger's Quarry	Stock		unspecified	Ne-86
Ottawa	Fox Stone Products, Inc.	Fox Stone Products, Inc.	Put-In-Bay		unspecified	Oa-18
	GenLime Group, L.P.	GenLime Group, L.P.	Clay	Niagaran dolomite (Silurian)	crushed stone — road construction/resurfacing; lime (burned stone) — building, chemical and industrial	Oa-1
	Standard Lafarge	Marblehead	Danbury	Columbus Limestone (Devonian)	crushed stone — riprap, portland cement concrete, asphaltic concrete, road construction/resurfacing, commercial building	Oa-7
	Stoneco, Inc.	Rocky Ridge	Benton		crushed stone — riprap, portland cement concrete, asphaltic concrete, road construction/resurfacing	Oa-14
Paulding	White Rock Quarry, L.P. Division of U.S. Aggregates, Inc.	White Rock Quarry	Allen	Guelph Dolomite (Silurian)	crushed stone — riprap, road construction/resurfacing, other: stone for portland cement manufacture; aglime	Oa-6
	The France Stone Co.	Paulding	Crane	Tennile Creek Dolomite (Devonian)	crushed stone — riprap, road construction/resurfacing	Pg-7
	Lafarge Corp.	Paulding Quarry	Crane	Detroit River Group & Dundee Limestone (Devonian)	stone for portland cement manufacture	Pg-1
	Stoneco, Inc.	Auglaize Quarry	Auglaize	Detroit River Group & Dundee Limestone (Devonian)	crushed stone — riprap, flux stone, portland cement concrete, asphaltic concrete, road construction/resurfacing, commercial building, railroad ballast, other: aglime	Pg-2
Perry	Maxville Quarries, Inc.	Maxville Quarries, Inc.	Monday Creek	Maxville Limestone (Mississippian)	crushed stone — road construction/resurfacing; unspecified	Py-235
	Melvin Stone Co.	Maxville Quarries, Inc.	Monday Creek		crushed stone — road construction/resurfacing	Py-343
Pickaway		Melvin Stone Co.	Perry	Columbus Limestone (Devonian)	crushed stone — riprap, portland cement concrete, road construction/resurfacing, commercial building, residential/farm use	Pky-4
Pike	Latham Limestone, Inc.	Latham Limestone, Inc.	Miffin	Greenfield Dolomite (Silurian)	crushed stone — riprap, road construction/resurfacing; aglime	Pke-13
Preble	Wysong Stone Co.	Wysong Stone Co.	Twin		crushed stone — riprap, road construction/resurfacing, ice control; dimension stone	Pre-5
Putnam	Putnam Stone Co.	Putnam Stone Co.	Pleasant, Riley	Silurian	crushed stone — riprap, flux stone, portland cement concrete, road construction/resurfacing	Pm-2
Sandusky	Gotttron Bros. Co.	Gotttron Bros. Co.	Sandusky	Niagaran dolomite (Silurian)	crushed stone — portland cement concrete, road construction/resurfacing, commercial building, fill	Sy-5
	Martin Marietta Magnesia Specialties, Inc.	Woodville Quarry	Woodville	Guelph Dolomite (Silurian)	crushed stone — riprap, flux stone; lime (burned stone) — chemical and industrial	Sy-1
	Redland Ohio, Inc.	Woodville Plant	Woodville	Silurian	crushed stone — flux stone, road construction/resurfacing; aglime; lime (burned stone) — chemical and industrial, other	Sy-34

Seneca	The France Stone Co.	Bloomville	Bloom	Columbus & Delaware Limestones (Devonian)	crushed stone — riprap, road construction/ resurfacing; aglime	Sa-3
		Flat Rock	Thompson	Columbus & Delaware Limestones (Devonian)	crushed stone — riprap, road construction/ resurfacing; aglime	Sa-1
	Premier Services Corp.	Premier Services Corp.	Liberty		unspecified	Sa-2
Shelby	North Shore Stone Quarries, Inc.	North Shore Stone Quarries, Inc.	Thompson		crushed stone — riprap; dimension stone	Sa-8
	Miami River Stone Co.	Miami River Stone Co.	Orange	Cedarville Dolomite (Silurian)	crushed stone — riprap, road construction/ resurfacing	Shy-6
	Sidney Sand & Gravel Co.	Rock Run Quarry	Washington		crushed stone — riprap, road construction/ resurfacing	Shy-16
	Spring Creek Corp.	River Quarry	Clinton		crushed stone — road construction/resurfacing; commercial building	Shy-15
Tuscarawas	Belden Brick Co.	Moomaw Pit	Sugar Creek	Vanport limestone (Pennsylvanian)	crushed stone — unspecified	Ts-1517
	Kimble Clay & Limestone Co.	Kimble Clay & Limestone Co.	Dover	Vanport limestone (Pennsylvanian)	crushed stone — riprap, road construction/ resurfacing	Ts-1818
	L & M Mineral Co.	Spring	Mill		crushed stone — unspecified	Ts-1982
Union	Sugarcreek Clay & Limestone, Inc.	Sugarcreek Clay & Limestone, Inc.	Sugar Creek		crushed stone — road construction/resurfacing	Ts-1928
	Northwood Stone & Asphalt Co.	Rockhold Division	York		crushed stone — riprap, road construction/ resurfacing; other; aglime	Un-1
Van Wert	Union Aggregates Co.	Union Limestone Plant	Mill Creek	Columbus Limestone (Devonian)	crushed stone — riprap; other; aglime	Un-2
	Ridge Township Quarry	Ridge Township Quarry	Ridge	Tymochtee Dolomite (Silurian)	crushed stone — unspecified	Vt-7
	Stoneco, Inc.	Scott Quarry	Union		crushed stone — riprap, portland cement concrete, asphaltic concrete, road construction/ resurfacing; unspecified	Vt-3
	Suever Stone Co., Inc.	Delphos Quarry	Washington	Tymochtee Dolomite (Silurian)	crushed stone — portland cement concrete, asphaltic concrete, road construction/ resurfacing; railroad ballast, driveway use, other	Vt-1
Vinton	Quality Stone Co.	Quality Stone Co.	Elk		unspecified	Vn-190
		Route 32	Clinton		unspecified	Vn-193
Wood	The France Stone Co.	Custar	Milton		crushed stone — riprap, road construction/ resurfacing; aglime	Wd-5
	MacRitchie Materials, Inc.	MacRitchie Materials, Inc.	Perry	Lockport & Salina Dolomites (Silurian)	unspecified	Wd-1
	Stoneco, Inc.	Lime City Quarry	Perrysburg		crushed stone — riprap, portland cement concrete, asphaltic concrete, road construction/ resurfacing; unspecified; aglime	Wd-6
		Portage Quarry	Portage	Greenfield & Lockport Dolomites (Silurian)	crushed stone — riprap, portland cement concrete, asphaltic concrete, road construction/ resurfacing; unspecified	Wd-11

<sup>3</sup>See also Guernsey County.<sup>4</sup>Information for Sy-3 includes information for Sy-4.

## 1993 OHIO DIRECTORY OF LIMESTONE/DOLOMITE MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY — Continued

County	Name of operator	Name of mine or quarry	Township	Geological unit	Type and principal use	State mine number
Wyandot	McCarthy Stone Quarry	McCarthy Stone Quarry	Pitt	Bass Islands Group (Silurian)	crushed stone — asphaltic concrete, road construction/resurfacing	Wt-3
	National Lime & Stone Co.	Carey Plant	Crawford	Silurian	crushed stone — riprap, flux stone, commercial building, railroad ballast, extenders, fillers; aglime; lime (burned stone) — chemical and industrial	Wt-1
	Wyandot Dolomite, Inc.	Wyandot Dolomite, Inc.	Crawford	Greenfield & Guelph Dolomites (Silurian)	crushed stone — riprap, portland cement concrete, asphaltic concrete, road construction/resurfacing, commercial building, railroad ballast, manufacturing sand, sinter; aglime	Wt-8



## 1993 SAND AND GRAVEL COMPANIES WITH SALES OR PRODUCTION

Company	No. of operations	Sales (tons)	Production (tons)	Company	No. of operations	Sales (tons)	Production (tons)
Agg Rok Materials, Div. of Wapak Sand & Gravel Co.	1	687,084	667,353	Erie Sand & Gravel Co.	1 dredger	39,663	39,663
William Albert, Inc.	1	31,106	63,802	Craig Fankhauser	1	8,163	8,163
Allgeier & Son, Inc.	1	48,050	48,050	Feikert Sand & Gravel, Inc.	1	103,274	103,274
American Aggregates Corp.	16	8,167,734	7,343,529	Fenner Sand & Gravel, Inc.	1	188,000	188,000
American Sand & Gravel	3	670,725	670,725	Fleckenstein Farm Gravel Pit	1	2,611	2,611
Apache Aggregate & Paving Co.	2	95,088	77,074	Flesher Sand & Gravel, Inc.	1	58,448	58,448
Ashcraft Sand & Gravel, Inc.	1	62,159	62,159	Fouremen's Sand & Gravel, Inc.	1	36,984	36,984
Atlas Towing Co.	1	10,743	10,743	Friendsville Sand, L.P.	1	61,725	61,725
Aurora Sand & Gravel, Inc.	1	290,508	364,567	Frye Sand & Gravel, Inc.	1	2,089	2,089
B & D Paving Co.	1	14,673	14,673	Ganges Gravel	1	877	877
Baker Sand, Inc.	1	583,180	583,180	John L. Garber Materials, Inc.	1	278,833	228,711
Barrett Paving Materials, Inc.	1	174,039	174,039	Al Gasser Excavating, Inc.	1	750	750
Beck Sand & Gravel, Inc.	1	188,493	188,493	Gerken Materials, Inc.	1	80,225	80,225
Becky Lane Trucking, Inc.	1	34,335	34,335	Gibson Sand & Gravel Co.	1	768	768
Paul D. Beery Trucking Co.	1	8,231	600	David B. Good	1	420	410
Benco Leasing, Inc.	1	51,277	67,026	Good Builders	1	1,353	1,353
Black Top Contracting, Inc.	1	14,537	14,537	Goodwin Sand & Gravel, Inc.	1	119,875	146,000
E.E. Blair Construction Co.	1	95,000	95,000	The Gravel Co.	1	87,785	87,785
Bolin & Bartley, Inc.	2	118,007	118,007	Green Oaks Potting Products, Inc.	1	418	418
D.H. Bowman & Sons, Inc.	1	58,354	76,784	Gregory Materials Co.	1	2,991	2,991
Boyas Excavating, Inc.	1	4,000	4,000	H & H Utilities Co.	1	11,534	11,534
Boyd Gravel Co.	2	384,772	445,734	Harrison Sand & Gravel Co.	1	86,455	85,800
Briggs Sand & Gravel, Inc.	1	9,558	9,558	Haubeil & Sons Asphalt & Materials, Inc.	1	43,965	43,965
Broadway Sand & Gravel, Inc.	1	31,298	31,298	Haueter Sand & Gravel, Inc.	1	215,783	215,783
Broshear Contractors, Inc.	1	10,926	10,926	Heiser Sand & Gravel	1	32,694	109,637
Karl Brugmann Sand & Gravel, Inc.	1	86,009	86,009	Paul N. Herdman	1	620	620
Oscar Brugmann Sand & Gravel, Inc.	1	483,219	540,000	Hidden Harbour Partners	1	4,669	4,669
Buckeye Excavating	1	26,559	26,559	Hillsdale Sand & Gravel, Inc.	1	24,571	24,571
James Bunnell, Inc.	3	468,077	468,077	Hilltop Aggregate, Inc.	1	426,062	426,062
Burlington Sand & Gravel Co.	1	5,149	5,149	Hilltop Basic Resources, Inc.	2	1,313,379	1,081,147
Canton Aggregate, Div. of Central Allied Enterprises, Inc.	2	658,751	594,439	Hilltop Basic Resources, Inc., dba Enon Washed Sand & Gravel Co.	1	275,813	256,679
Carter & Carter, Inc.	1	909	909	Hocking Valley Concrete, Inc.	1	70,000	70,000
Cedar Heights Clay Co., Division of Resco Products, Inc.	1	513	513	William A. Hoffman, Jr.	1	6,621	6,621
Center West Enterprise, Inc.	1	9,502	9,502	Tom Hollinger Excavating	1	1,336	1,336
Jeff Chaney	1	13,581	13,581	Hugo Sand Co.	1	217,737	217,737
Charlestown Sand & Gravel, Inc.	1	33,040	33,040	Hutson Road Mining Co.	1	297	297
Chattin Concrete	1	800	0	Indian Creek Sand & Gravel Co.	1	6,229	6,229
Chesterhill Stone Co.	2	295,992	260,393	J & A Excavating	1	250	250
Chesterville Sand & Gravel Co., Inc.	1	125,025	125,025	J. P. Sand & Gravel Co.	1	517,299	517,299
Chillicothe Sand & Gravel Co.	1	238,863	270,315	Janson's Soil Service, Inc.	1	230	230
M.J. Coates Construction Co.	1	127,201	127,201	Jarrett Sand Co.	1	4,529	4,529
Cochran Transportation Services, Inc.	1	44,964	44,964	Jaymar, Inc.	1	187,735	187,735
Boone Coleman	1	4,000	4,000	Jefferson Materials Co.	1	297,498	297,498
Cremeans Concrete & Supply	1	5,803	5,803	Jimco, Inc.	1	6,212	6,212
R.A. Cruise Sand & Gravel, Inc.	1	34,744	30,385	Johnson Rd. Sand & Gravel, Inc.	1	5,905	5,905
D & D Sand Bank	1	4,985	4,985	John E. Jones Construction Co.	1	1,531	1,531
D & W Sand & Gravel	1	3,952	3,952	Joseph Sand & Gravel, Inc.	1	6,174	6,174
Darby Gravel Co.	1	6,560	6,560	R.G. Karg Development Co.	1	11,600	11,600
Demmy Construction, Inc.	1	15,149	15,149	Karg Sand & Gravel Co.	1	79,250	79,250
Demmy Sand & Gravel	1	8,186	8,186	Keener Sand & Clay Co.	1	485	485
A. J. Diana Sons, Inc.	1	3,641	3,641	Kilbarger Construction, Inc.	1	90	90
Dingledine Basic Materials, Inc.	1	107,360	107,360	Kinsman Sand & Gravel Co.	2	59,864	34,765
Don's Dozer Service	1	862	862	Kipp's Gravel Co., Inc.	1	148,562	148,562
James E. Downard	1	497	497	Kirby's Sand & Gravel, Inc.	2	76,179	76,179
Dravo Basic Materials Co., Inc.	5	2,559,302	3,718,306	T & K Kuhnle Co.	1	121,604	121,604
Dry Creek Gravel Co.	2	209,473	188,523	L & I Natural Resources, Inc.	1	133,626	133,626
C. E. Duff & Son, Inc.	2	87,632	87,632	Lake Hope Asphalt, Inc.	1	45,632	23,400
E.A. Construction, Inc.	1	80	80	Lakeside Sand & Gravel Co.	1	249,209	249,209
Easton Resources, Inc.	1	1,275	1,275	Lancaster Sand & Gravel Co.	1	653,220	563,070
Eaton Sand & Gravel Co.	1	1,200	1,200	Larkin Sewer Contractors, Inc.	1	31,317	0
Daniel Ebie Trucking	1	16,176	16,176	Leetonia Sand & Gravel Co., Inc.	1	13,775	33,607
David E. Edington	1	5,296	5,296	Bertha A. Leonard	1	200	200
Elm Spring Farm	1	8,300	8,300	Lerkis Asphalt Paving Co., Inc. & Subsidiary	1	300	300
Embro, Inc.	1	80,292	77,953	Letart Corp.	1	3,991	3,991
Bill Enyart & Son Contracting, Inc.	1	3,149	3,149	Carroll Lifer Excavating, Inc.	1	4,499	4,499

## 1993 SAND AND GRAVEL COMPANIES WITH SALES OR PRODUCTION – Continued

Company	No. of operations	Sales (tons)	Production (tons)	Company	No. of operations	Sales (tons)	Production (tons)
Loxley Aggregates, Inc.	1	8,633	6,756	Sant Sand & Gravel, Inc.	1	113,907	75,060
Luburgh, Inc.	1	17,550	17,550	Guy Schieve	1	4,925	4,925
Lucky Sand & Gravel Co.	1	109,277	109,277	Schloss Materials Co.	1	121,995	121,995
M & J Sand & Gravel, Inc.	1	10,711	10,711	Scioto Sand & Gravel	1	3,926	3,926
Donald Martin Contracting	1	300	300	Scioto Valley Resources	1	434,616	437,198
Mason's Sand & Gravel Co.	1	77,437	77,437	Seaway Sand & Stone, Inc.	2	189,001	189,001
Massillon Materials, Inc.	2	416,885	416,885	Seville Sand & Gravel, Inc.	1	358,937	358,937
Massillon Washed Gravel Co.	1	263,166	263,166	R. W. Sidley, Inc.	2	116,300	116,300
Bill McKeever Excavating, Inc.	1	1,497	1,497	Sidney Sand & Gravel Co.	2	222,990	222,990
Mecco, Inc.	1	267,612	294,015	Simak Trucking, Inc.	1	53,169	53,169
Mechanicsburg Sand & Gravel, Inc.	1	234,681	213,553	Small's Sand & Gravel, Inc.	2	218,850	218,850
Menuiez Bros. Sand & Gravel, Inc.	1	260,286	260,286	Sober Sand & Gravel Co.	1	300	0
Mesenburg Bros., Inc.	1	4,066	4,066	Soehnlén Bros. Sand & Gravel Co.	1	99,632	83,900
Miami River Stone Co.	1	283,678	283,678	Solomon's Mines, Inc.	1	37,723	37,723
Mickley Gravel Co.	1	1,720	1,608	Solon Excavators Sand & Gravel, Inc.	2	330,795	330,795
Miller Bros. Construction, Inc.	1	4,721	0	Soltis Sand & Gravel	1	2,968	2,968
Miller Bros. Gravel, Inc.	1	234,025	202,697	Southern Ohio Aggregates, Inc.	4	7,000	7,000
Miller Sand & Gravel Co.	1	1,608	402	Southern Ohio Sand & Gravel, Inc.	1	231,091	231,091
Moore's Excavating Co.	1	65,312	54,312	Spring Creek Corp.	3	387,019	387,019
Morrow Gravel Co.	2	354,909	354,909	Spring Industries, Inc.	2	266,897	289,100
Muskingum River Gravel Co.	5	469,100	469,100	City of Springfield	1	13,000	13,000
National Aggregates, Inc.	1	193,591	193,591	Springfield Sand & Gravel Co.	1	443,181	443,181
National Lime & Stone Co.	4	369,462	364,257	Standard Lafarge	4	1,367,427	1,368,937
Neer's Sand & Gravel	1	145,581	199,814	Stewart & Reichman, Inc.	1	60,716	60,716
Nelson Sand & Gravel, Inc.	1	12,650	12,650	Stillwater Sand & Gravel, Inc.	1	179,736	179,736
Newbury Sand & Gravel	1	9,684	9,864	Stocker Sand & Gravel Co.	2	866,098	866,098
New Carlisle Sand & Gravel Co.	1	1,267	1,267	Stoneco, Inc.	1	256,583	256,583
Newton Asphalt Paving, Inc.	1	100,506	100,506	Sunshine Sand Co.	1	1,250	1,250
Nick's Trucking	1	8,489	8,489	Tackett Builders	1	453	453
Northern Ohio Materials, Inc.	1	319,116	317,293	Teague Gravel Co., Inc.	1	74,232	74,232
Northern Ohio Paving Co.	1	208,867	208,867	Tipp Stone Co., Inc.	2	103,351	103,351
Northmont Sand & Gravel Co.	1	2,770	391	Tri-State Asphalt Productions	1	267,346	268,956
Carl E. Oeder & Sons Sand & Gravel	1	456,329	456,329	Trout Sand & Gravel Co.	1	47,966	47,966
Olen Corp.	3	2,342,942	2,380,181	Tuffco Sand & Gravel, Inc.	1	126,110	89,200
Oneida Sand & Gravel, Inc.	1	87,137	96,056	Union Aggregates Co.	1	42,809	35,371
Osborne Materials Co.	1 dredger	109,597	109,597	Valley Materials Co.	1	79,560	79,560
Oster Sand & Gravel, Inc.	3	585,337	585,337	Van Wey Sand & Gravel, Inc.	1	442,108	482,850
Ours Sand & Gravel	1	7,058	7,058	Ralph C. Wagner & Sons	1	50	50
Penn Eagle Coal Corp.	1	805	805	Wallace Rd. Sand & Gravel	1	28,134	28,134
Penry Stone Co.	1	54,292	54,292	Tommie G. Walters	1	105	105
Phillips Sand & Gravel	1	471,506	470,786	Ward Materials, Inc.	1	49,141	50,641
Portage Lakes Sand & Gravel Co.	1	178,690	178,690	Don Wartko Construction, Inc.	1	847	847
Prairie Lane Sand & Gravel Co.	1	171,049	171,049	Watson Gravel, Inc.	4	1,654,092	1,654,092
Precision Aggregate, Inc.	1	50,689	128,777	Weber Aggregates	1	11,995	11,995
Quality Ready Mix, Inc.	1	53,213	53,213	Weber Sand & Gravel, Inc.	1	254,225	254,225
R & S, Inc.	1	26,558	26,558	Weidle Sand & Gravel, Inc.	2	328,341	328,341
Rack Sand, Inc.	1	16,518	16,518	Welch Sand & Gravel, Inc.	3	745,030	745,030
Rainbow Sand & Gravel, Inc.	1	93,698	93,698	Mark Williams Blacktop Co., Inc.	1	39,013	72,778
John P. Raisch, Inc.	1	5,900	5,900	Willowbrook	1	1,172	1,172
Red Brush Peat Co.	1	1,123	1,123	Eugene T. Wilson	1	1,610	1,610
Richards & Son, Inc.	1	541,709	541,709	Wise Gravel	1	2,933	413
Richard Farms, Inc.	1	24,409	24,409	Wysong Gravel Co.	2	304,475	304,475
Richards Service Garage	1	50	50	X L Sand & Gravel	1	68,200	68,200
Ries Sand & Gravel	1	1,144	1,144	Xenia Sand, Gravel & Asphalt Co.	1	1,575	735
Riverside Sand & Gravel Co., Inc.	1	22,497	22,497	York Road Gravel Co.	1	71,025	71,025
Gary Roberts Excavating	1	1,830	1,830	Young's Sand & Gravel Co.	2	337,697	337,697
Rogers Group, Inc., dba Norwalk	1	235,058	235,058	Zink Petroleum Corp., dba State Rte.	1	215,318	195,242
Sand & Gravel	1	179,591	179,591	416 Sand & Gravel	1	111,018	111,018
Ross County Gravel Co.	1	194,418	179,101	Zollinger Sand & Gravel Co.	1		
Rubber City Sand & Gravel Co.	1	347,824	299,030				
Rupp Construction, Inc.	2						
S & S Aggregate, Inc.	5	597,770	597,770	TOTAL: 253 companies	329	47,769,475	47,972,399
G. M. Sader Excavating & Paving, Inc.	1	8,783	8,783				
Salt Creek Materials, Inc.	1	739	0				
Samco, Inc.	1	389,040	389,040				
Sandman Sand & Stone, Inc.	2	149,144	149,144				

# 1993 OHIO DIRECTORY OF LAKE ERIE SAND AND GRAVEL DREDGERS

Name of operator	Permitted dredging areas
Erie Sand & Gravel Co. Osborne Materials Co.	Vermilion-Lorain Area "A," Vermilion-Lorain Area "B" Fairport

## 1993 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

For those mines for which the Division of Mines has not assigned a state mine number, a letter designation is used (example: Ald-G).

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Allen	Ward Materials, Inc.	Ward Materials, Inc.	Monroe	sand — asphaltic concrete, filtration gravel — building, filtration	An-15
Ashland	Bolin & Bartley, Inc.	Simington Rd.	Montgomery	sand — building, asphaltic concrete gravel — building, filtration	Ald-16
	David B. Good	David B. Good	Jackson	sand — bank run	Ald-G
	Ries Sand & Gravel	Ries Sand & Gravel	Mohican	gravel — bank run	Ald-9
	Young's Sand & Gravel Co.	Sprang	Green	sand — building gravel — building	Ald-7
		Young's Sand & Gravel Co.	Green	sand — building, road construction/resurfacing, other gravel — building, road construction/resurfacing, other	Ald-15
Ashtabula	Easton Resources, Inc. Frye Sand & Gravel, Inc.	Easton Resources, Inc. Frye Sand & Gravel, Inc.	Plymouth Denmark	sand — backfill sand — unspecified gravel — unspecified	Asa-E Asa-10
		Janson's Soil Service, Inc. Kinsman Sand & Gravel Co.	Morgan Wayne	gravel — building sand — unspecified gravel — unspecified	Asa-14 Asa-17
	Nelson Sand & Gravel, Inc. R. W. Sidley, Inc.	Kinsman Sand & Gravel Co.	Wayne	sand — unspecified gravel — unspecified	Asa-K
		Nelson Sand & Gravel, Inc. Conneaut Pit	N. Kingsville Kingsville	gravel — building sand — unspecified	Asa-N Asa-15
	Simak Trucking, Inc.	Simak Trucking, Inc.	Kingsville	gravel — unspecified sand — building, road construction/resurfacing, filtration, ice control	Asa-18
		Black Top #1	Rome	gravel — building, filtration sand — asphaltic concrete	As-588
Athens	Cochran Transportation Services, Inc.	Cochran Transportation Services, Inc.	Dover	gravel — asphaltic concrete sand — building, road construction/resurfacing	As-595
	Lake Hope Asphalt, Inc.	Lake Hope Asphalt, Inc.	York	gravel — building, road construction/resurfacing sand — asphaltic concrete, filtration, other	As-1161
	Weber Aggregates	Weber Aggregates	Rome	gravel — asphaltic concrete, filtration, other sand — unspecified gravel — unspecified	As-W
	Joseph Sand & Gravel, Inc. National Lime & Stone Co.	Joseph Sand & Gravel, Inc. Wapakoneta Plant	Union Union	gravel — fill sand — building, portland cement concrete gravel — portland cement concrete	Ae-23 As-30
Belmont	Quality Ready Mix, Inc.	Quality Pit	Pusheta	sand — unspecified gravel — unspecified	Ae-16
	Tri-State Asphalt Productions	Tri-State Asphalt Productions	Mead	sand — portland cement concrete, asphaltic concrete, fill gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill, drainage	Br-74
Butler	American Aggregates Corp.	Fairfield #711	Fairfield	sand — road construction/resurfacing gravel — road construction/resurfacing	Br-35
		Hamilton #710	St. Clair	sand — road construction/resurfacing gravel — road construction/resurfacing	Br-5



## 1993 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY — Continued

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Butler (cont.)	Broshear Contractors, Inc.	Ross Township Gravel	Ross	sand — unspecified gravel — unspecified	Br-48
	Dingledine Basic Materials, Inc.	Dingledine Basic Materials, Inc.	Milford	sand — building, road construction/resurfacing, unspecified	Br-50
	Dravo Basic Materials Co., Inc.	Ross Plant	Ross	gravel — road construction/resurfacing	Br-29
	The Gravel Co.	New Miami Pit	St. Clair	gravel — unspecified sand — unspecified	Br-3
	Indian Creek Sand & Gravel Co. Mecco, Inc.	Indian Creek Sand & Gravel Co. Mecco, Inc.	Ross Lemon	gravel — building, road construction/resurfacing, bank run sand — road construction/resurfacing, fill	Br-40 Br-15
	Southern Ohio Aggregates, Inc.	Southern Ohio Aggregates, Inc.	St. Clair	gravel — building, road construction/resurfacing, fill sand — unspecified	Br-S
	Watson Gravel, Inc.	Watson Pit	Fairfield	gravel — unspecified sand — building, portland cement concrete, asphaltic concrete, other	Br-47
	Weidle Sand & Gravel, Inc.	Weidle Sand & Gravel, Inc.	Madison	gravel — building, portland cement concrete, road construction/resurfacing, other	Br-6
	Welch Sand & Gravel, Inc.	Schlichter Pit	Fairfield	sand — unspecified gravel — unspecified sand — building	Br-38
	National Aggregates, Inc.	National Aggregates, Inc.	Brown	gravel — building	Cl-N
Carroll	Oneida Sand & Gravel, Inc.	Oneida Sand & Gravel, Inc.	Brown	sand — unspecified gravel — unspecified sand — asphaltic concrete	Cl-204
Champaign	American Aggregates Corp.	Urbana #215	Urbana	gravel — asphaltic concrete sand — road construction/resurfacing	Cpn-1
	D & W Sand & Gravel	D & W Sand & Gravel	Union	gravel — road construction/resurfacing	Cpn-21
	J & A Excavating	J & A Excavating	Wayne	sand — unspecified gravel — unspecified	Cpn-J
	Bill McKeever Excavating	Bill McKeever Excavating	Urbana	gravel — filtration	Cpn-24
	Mechanicsburg Sand & Gravel, Inc.	Mechanicsburg Sand & Gravel, Inc.	Union	gravel — driveway use sand — unspecified	Cpn-22
	Moore's Excavating Co.	Moore's Excavating Co.	Salem	gravel — unspecified sand — building	Cpn-20
	American Aggregates Corp.	Fairborn #413	Bethel	gravel — building	Ck-13
	Barrett Paving Materials, Inc.	Fairborn #141	Mad River	sand — road construction/resurfacing gravel — road construction/resurfacing	Ck-28
	Denny Construction, Inc.	Kieffer Pit	Mad River	gravel — asphaltic concrete sand — building	Ck-501
	Denny Sand & Gravel	Denny Sand & Gravel	Mad River	gravel — building sand — building	Ck-502
	Hilltop Basic Resources, Inc. (dba Enon Washed Sand & Gravel Co.)	Enon Washed Sand & Gravel Co.	Bethel	gravel — fill	Ck-3
	Hilltop Basic Resources, Inc.	Fairborn Aggregate Plant	Bethel	sand — building, portland cement concrete, asphaltic concrete, fill, base	Ge-4 <sup>1</sup>
	City of Springfield	City of Springfield	German	gravel — portland cement concrete, asphaltic concrete, fill, base sand — unspecified	Ck-7
Clermont	Springfield Sand & Gravel Co.	Springfield Sand & Gravel Co.	Springfield	gravel — unspecified sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Ck-25
	John E. Jones Construction Co.	John E. Jones Construction Co.	Washington	road construction/resurfacing gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill, ice control	Ct-11
	Kipp's Gravel Co., Inc.	Kipp's Gravel Co., Inc.	Stonelick	sand — unspecified gravel — unspecified	Ct-7
				gravel — unspecified	

Columbiana	Hutson Road Mining Co. Leetonia Sand & Gravel Co., Inc. Willowbrook X L Sand & Gravel	Hutson Road Mining Co. Leetonia Sand & Gravel Co., Inc. Willowbrook X L Sand & Gravel	Middleton Salem Elk Run Middleton	gravel — driveway use sand — portland cement concrete, mason sand, fill gravel — road construction/resurfacing sand — unspecified gravel — unspecified sand — unspecified gravel — unspecified	Ca-H Ca-982 Ca-993 Ca-881
Coshocton	William Albert, Inc. Apache Aggregate & Paving Co. Boyd Gravel Co.	William Albert, Inc. Apache Aggregate & Paving Co. Apache Aggregate & Paving Co. Boyd Gravel Co.	Franklin Jackson Keene Bethlehem	sand — building, road construction/resurfacing, filtration, other gravel — building, road construction/resurfacing, filtration, other sand — unspecified gravel — unspecified sand — asphaltic concrete gravel — asphaltic concrete sand — portland cement concrete, asphaltic concrete, road construction/resurfacing, filter sand gravel — portland cement concrete, asphaltic concrete, road construction/resurfacing, berm aggregate	Cn-828 Cn-718 Cn-783 Cn-694
Crawford	Gibson Sand & Gravel Co.	Gibson Sand & Gravel Co.	Jefferson	sand — unspecified gravel — unspecified	Cd-3
Cuyahoga	Boyas Excavating, Inc.	Boyas' Valley View Quarry	Independence	sand — building	Cya-42
Darke	Fourman's Sand & Gravel, Inc.	Fourman's Sand & Gravel, Inc.	Greenville	sand — unspecified	Dke-4
Defiance	Tom Hollinger Excavating	Hollinger Gravel Plant	Harrison	gravel — unspecified gravel — farm ballast	Dke-10
Erie	Hillsdale Sand & Gravel, Inc. Jarrett Sand Co. Keener Sand & Clay Co. Mesenburg Bros., Inc.	Hillsdale Sand & Gravel, Inc. Jarrett Sand Co. Huron Plant Mesenburg Bros., Inc.	Farmer Groton Huron Milan	gravel — road construction/resurfacing sand — fill sand — filtration, foundry sand — bank run	De-2 Ee-29 Ee-5 Ee-24
Fairfield	Paul D. Beery Trucking Co. James E. Downard	Paul D. Beery Trucking Co. James E. Downard	Berne Rush Creek	sand — unspecified gravel — unspecified sand — fill gravel — building	Fd-14 Fd-16
Franklin	Lancaster Sand & Gravel Co. Agg Rok Materials (Div. of Wapak Sand & Gravel Co.) American Aggregates Corp. J. P. Sand & Gravel Co. Mason's Sand & Gravel Co. Olen Corp.	Lancaster Sand & Gravel Co. Agg Rok Materials Lockbourne #213 Columbus #210 J. P. Sand & Gravel Co. Mason's Sand & Gravel Co. Hilliard Plant #1 Columbus Plant #3 Plant #1 Road 1 Tommy G. Walters	Berne Franklin Hamilton Marion Hamilton Hamilton Brown Hamilton Hamilton	sand — building, portland cement concrete, asphaltic concrete gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing sand — road construction/resurfacing gravel — road construction/resurfacing sand — road construction/resurfacing gravel — road construction/resurfacing sand — building gravel — building sand — building gravel — building sand — building, portland cement concrete gravel — building sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing sand — unspecified gravel — unspecified	Fd-13 Fn-36 Fn-23 Fn-6 Fn-52 Fn-11 Fn-43 Fn-58
Fulton	S & S Aggregate, Inc. Sandman Sand & Stone, Inc. Tommy G. Walters	Plant #1 Road 1 Tommy G. Walters	Hamilton Swan Creek Swan Creek	sand — building, other sand — other	Fn-24 Ftn-S Ftn-6

\*See also Greene County.

## 1993 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY — Continued

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Gallia	Cedar Heights Clay Co. Div. of Resco Products, Inc. Cremeans Concrete & Supply Jaymar, Inc.	Gallia Red Sand	Springfield	sand — landscaping	Ga-507
		Cremeans Concrete & Supply Jaymar, Inc.	Addison Addison	gravel — landscaping sand — building, fill, bank run sand — unspecified gravel — unspecified sand — unspecified	Ga-626 Ga-J Ga-O
	Ours Sand & Gravel	Ours Sand & Gravel	Ohio	sand — building, portland cement concrete, asphaltic concrete gravel — filtration, oversize	Gea-29
	Haueter Sand & Gravel, Inc.	Haueter Sand & Gravel, Inc.	Burton, Newbury	sand — fill sand — building gravel — building sand — fill	Gea-N Gea-40 Gea-9
Geauga	Newbury Sand & Gravel Solon Excavators Sand & Gravel, Inc.	Newbury Sand & Gravel Trethewey	Burton, Newbury Auburn	gravel — bank run sand — unspecified gravel — unspecified sand — building, road construction/resurfacing, filtration, nursery use, landscaping gravel — building, road construction/resurfacing, filtration, septic system	Gea-32 Gea-33 Gea-42 Gea-47
	Soltis Sand & Gravel	Soltis Sand & Gravel	Parkman	gravel — unspecified	Gea-40
	T & K Kuhnle Co.	T & K Kuhnle Co.	Auburn	gravel — unspecified	Gea-42
	Teague Gravel Co., Inc.	Teague Gravel Pit	Newbury	gravel — unspecified	Gea-35
Greene	American Aggregates Corp.	Haines Rd. #419	Beaver Creek	sand — road construction/resurfacing	Gea-32
		Xenia #414	Beaver Creek	gravel — road construction/resurfacing	Gea-33
	M.J. Coates Construction Co.	Spring Valley Gravel #434	Spring Valley	gravel — road construction/resurfacing	Gea-42
	Hilltop Basic Resources, Inc.	M.J. Coates Construction Co.	Spring Valley	gravel — road construction/resurfacing	Gea-47
Hamilton	Donald Martin Contracting	Fairborn Aggregate Plant	Bath	gravel — road construction/resurfacing	Gea-42
	Phillips Sand & Gravel	Donald Martin Contracting	Spring Valley	sand — building, portland cement concrete, asphaltic concrete, fill, base sand — unspecified	Gea-40
	Richards Service Garage	Phillips Sand & Gravel	Beaver Creek	gravel — unspecified	Gea-36
	Watson Gravel, Inc.	Richards Service Garage	Xenia	gravel — unspecified	Gea-R
	Xenia Sand, Gravel & Asphalt Co.	Spring Valley	Spring Valley	gravel — unspecified	Gea-38
		Xenia Sand, Gravel & Asphalt Co.	Xenia	sand — building, portland cement concrete, asphaltic concrete resurfacing gravel — building, road construction/resurfacing	Gea-10
	Allgeier & Son, Inc.	Allgeier & Son, Inc.	Miami	sand — building	Hmn-AS1
	American Aggregates Corp.	Harrison #712	Harrison	gravel — building sand — road construction/resurfacing	Hmn-37
	Ashcraft Sand & Gravel, Inc. James Bunnell, Inc.	Campbell Rd. #715	Harrison	gravel — road construction/resurfacing	Hmn-69
	Dravo Basic Materials Co., Inc.	Ashcraft Sand & Gravel, Inc. James Bunnell, Inc.	Whitewater Harrison	gravel — road construction/resurfacing gravel — building sand — other gravel — other	Hmn-54 Hmn-50 Hmn-B
	Eaton Sand & Gravel Co.	James Bunnell, Inc.	Whitewater	gravel — other	Hmn-59
		James Bunnell, Inc.	Whitewater	sand — unspecified	Hmn-11 <sup>3</sup>
		Newtown Plant	Anderson	gravel — unspecified	Hmn-5
		Camp Dennison Plant	Symmes	sand — road construction/resurfacing	Hmn-46



Harrison Sand & Gravel Co.	Harrison Sand & Gravel Co.	Harrison	sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, foundry, ice control	Hmn-17
Bertha A. Leonard	Bertha A. Leonard	Crosby	gravel — building, filtration, other	Hmn-67
Rack Sand, Inc.	Rack Sand, Inc.	Mill Creek	sand — fill	Hmn-10
Southern Ohio Aggregates, Inc.	Southern Ohio Aggregates, Inc.	Colerain	gravel — unspecified	Hmn-S
Southern Ohio Sand & Gravel, Inc.	Southern Ohio Aggregates, Inc.	Whitewater	gravel — unspecified	Hmn-SO
Watson Gravel, Inc.	Southern Ohio Sand & Gravel, Inc.	Whitewater	gravel — unspecified	Hmn-71
Welch Sand & Gravel, Inc.	Harrison Pit	Whitewater	sand — other	Hmn-60
Gerken Materials, Inc.	East Miami Pit	Colerain	sand — building, portland cement concrete, asphaltic concrete, fill	Hmn-48
Good Builders Hocking Valley Concrete, Inc.	Fernald Pit	Crosby	gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Hmn-42
Kilbarger Construction, Inc. Muskingum River Gravel Co.	Gerken Materials, Inc.	Liberty	sand — building	Hy-5
Jeff Chaney	Good Builders Hocking Valley Concrete, Inc.	Green	gravel — asphaltic concrete	Hg-G
Feikert Sand & Gravel, Inc.	Hocking Valley Concrete, Inc.	Green	sand — building	Hg-262
Menuez Bros. Sand & Gravel, Inc.	Kilbarger Construction, Inc.	Falls	sand — unspecified	Hg-329
Rogers Group, Inc. (dba Norwalk Sand & Gravel)	Muskingum River Gravel Co.	Green, Starr	gravel — road construction/resurfacing	Hg-301
Penn Eagle Coal Corp.	Spring Run Gravel	Killbuck, Monroe	sand — unspecified	Hs-96
Goodwin Sand & Gravel, Inc.	Feikert Sand & Gravel, Inc.	Salt Creek	gravel — unspecified	Hs-511
Mickley Gravel Co.	Fair Pit	Hardy	sand — building, portland cement concrete, road construction/resurfacing	Hs-82
Olen Corp.	Norwalk Sand & Gravel	Norwalk	gravel — building, portland cement concrete, road construction/resurfacing, filtration	Hrn-1
S & S Aggregate, Inc.	B & S Mine	Saline	sand — building, portland cement concrete, asphaltic concrete, fill	Jfn-PE
Sant Sand & Gravel, Inc.	Goodwin Sand & Gravel, Inc.	Clinton	gravel — building, fill	Kx-7
	Mickley Gravel Co.	Union	sand — building, asphaltic concrete, road construction/resurfacing, other	Kx-5
	Fredericktown Plant #2	Morris	gravel — building, asphaltic concrete, road construction/resurfacing, other	Kx-16
	Plant #13	Middlebury	sand — unspecified	Kx-13
	Sant Sand & Gravel, Inc.	Clinton	gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Kx-3
			sand — building, asphaltic concrete, road construction/resurfacing	
			gravel — building, road construction/resurfacing	

<sup>2</sup>See also Clark County.  
<sup>3</sup>Information for Hmn-11 includes information for Hmn-70.

## 1993 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY — Continued

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Knox (cont.)	Small's Sand & Gravel, Inc.	Small's Sand & Gravel, Inc.	Harrison	sand — unspecified	Kx-15
		Small's Sand & Gravel, Inc.	Harrison	gravel — unspecified	Kx-17
Lake	R. W. Sidley, Inc.	Painesville Pit	Painesville	gravel — unspecified	Lke-7
				sand — unspecified	
Lawrence	Becky Lane Trucking, Inc.	B & L Sand	Perry	gravel — fill	Le-430
				sand — fill	
	Burlington Sand & Gravel Co. D & D Sand Bank	Burlington Sand & Gravel Co. D & D Sand Bank	Perry	sand — building, fill	Le-426
			Perry	gravel — unspecified	Le-445
Licking	Bill Enyart & Son Contracting, Inc.	Bill Enyart & Son Contracting, Inc.	Perry	sand — building, foundry	Le-E
	American Aggregates Corp.	Newark #214	Newark	sand — road construction/resurfacing	Lg-2
	Dry Creek Gravel Co.	Plant #3	Newton	gravel — road construction/resurfacing	Lg-DC
				sand — portland cement concrete, asphaltic concrete, road construction/resurfacing, unspecified	
		Plant #2	Washington	gravel — building, asphaltic concrete, road construction/resurfacing, unspecified	Lg-31
				sand — unspecified	
Logan	Gary Roberts Excavating	Gary Roberts Excavating	Madison	gravel — asphaltic concrete, road construction/resurfacing, unspecified	Lg-504
	Van Wey Sand & Gravel, Inc.	Van Wey Sand & Gravel, Inc.	Newton	gravel — driveway base	Lg-10
	York Road Gravel Co.	York Road Gravel Co.	Etna	sand — building, road construction/resurfacing	Lg-38
				sand — bank run	
Lorain	C. E. Duff & Son, Inc.	C. E. Duff & Son, Inc.	Lake	gravel — bank run	Lgn-36
	Miller Bros. Construction, Inc.	Duff Sand Co.	Washington	sand — road construction/resurfacing, filtration	Lgn-31
Lucas	Neer's Sand & Gravel	Neer's Sand & Gravel	Monroe	sand — building, portland cement concrete	Lgn-M
			Union	gravel — road cover	Lgn-6
	Guy Schieve	Guy Schieve	Henrietta	sand — unspecified	Ln-12
	Craig Fankhauser	Craig Fankhauser	Swanton	sand — building	Ls-F
Madison	Hidden Harbour Partners	Centennial Rd. Pit	Springfield	gravel — building	Ls-H
	Sandman Sand & Stone, Inc.	Archbold-Whitehouse Pit	Providence	sand — road construction/resurfacing, other	Ls-MH
Mahoning	Seaway Sand & Stone, Inc.	Stone Oaks	Springfield	sand — building, other	Ls-SS
		Seaway Sand & Stone, Inc.	Swanton	sand — building, construction	Ls-13
Marion	Tuftco Sand & Gravel, Inc.	Tuftco Sand & Gravel, Inc.	Darby	sand — building, road construction/resurfacing, construction	Mdn-11
				sand — asphaltic concrete, fill	
Marion	Solomon's Mines, Inc.	Solomon's Mines, Inc.	Green	gravel — building, fill, driveway use, parking lots	Mg-632
	Wallace Rd. Sand & Gravel	Wallace Rd. Sand & Gravel	Springfield	sand — building, filtration	Mg-630
Medina	Penry Stone Co.	Penry Stone Co.	Prospect	gravel — building, filtration	Mn-4
	Scioto Sand & Gravel Union Aggregates Co.	Scioto Sand & Gravel Prospect Sand & Gravel Plant	Prospect	sand — unspecified	Mn-16
	Baker Sand, Inc.	Baker Sand, Inc.	Prospect	gravel — unspecified	Mn-10
				gravel — fill	
			Harrisville, Westfield	sand — building	Ma-20
				sand — building, asphaltic concrete, road construction/resurfacing, fill	
	Friendsville Sand, L.P.	Friendsville Sand, L.P.	Westfield	gravel — road construction/resurfacing	Ma-23
				sand — building	

Meigs	Seville Sand & Gravel, Inc.	Seville Sand & Gravel, Inc.	Harrisville	sand — building, asphaltic concrete, septic system gravel — building, asphaltic concrete, road construction/ resurfacing	Ma-22
	Dravo Basic Materials Co., Inc.	Apple Grove Plant	Lefart	sand — road construction/resurfacing	Ms-205
	Lefart Corp.	Lefart Corp.	Olive	gravel — road construction	Ms-308
	Richards & Son, Inc.	Richards & Son, Inc.	Lefart	sand — building, road construction/resurfacing sand — building, asphaltic concrete, road construction/resurfacing gravel — building, asphaltic concrete, road construction/ resurfacing, filtration	Ms-298
Miami	American Aggregates Corp.	Troy Gravel #433	Concord	sand — road construction/resurfacing	Mi-3
	Fenner Sand & Gravel, Inc.	Woodville Concrete Corp.	Newton	gravel — road construction/resurfacing	Mi-4
	New Carlisle Sand & Gravel Co.	New Carlisle Sand & Gravel Co.	Bethel	gravel — unspecified	Mi-501
	Stillwater Sand & Gravel, Inc.	Stillwater Sand & Gravel, Inc.	Union	gravel — fill	Mi-504
	Tipp Stone Co., Inc.	Troy	Elizabeth	sand — building, unspecified	Mi-12
	Wise Gravel	Wise Gravel	Newberry	sand — unspecified	Mi-9
Monroe	B & D Paving Co.	B & D Paving Co.	Salem	sand — building, farm use gravel — building, farm use, bank run	Me-508
Montgomery	American Aggregates Corp.	Rip Rap Road #416	Wayne	sand — bank run gravel — bank run	My-66
	Broadway Sand & Gravel, Inc.	Broadway Sand & Gravel, Inc.	Harrison	sand — road construction/resurfacing	My-65
	Carter & Carter, Inc.	Carter & Carter, Inc.	Miami	gravel — building	My-CW
	H & H Utilities Co.	H & H Gravel	Miami	gravel — building, road construction/resurfacing	My-68
	Hilltop Basic Resources, Inc.	West Carrollton Aggregate Plant	Jefferson, Miami	sand — unspecified	My-19
	Jimsco, Inc.	Taylorville Rd. Hardfill	Wayne	sand — building, portland cement concrete, asphaltic concrete	My-55
	Miller Bros. Gravel, Inc.	Miller Bros. Gravel, Inc.	Butler	gravel — portland cement concrete, asphaltic concrete, fill, base sand — building, portland cement concrete, masonry	My-52
	Northmont Sand & Gravel Co.	Northmont Sand & Gravel Co.	Randolph	gravel — building, portland cement concrete, road construction/ resurfacing, filtration, other	My-49
	John P. Raish, Inc.	John P. Raish, Inc.	Jefferson	sand — building	My-R
	Tipp Stone Co., Inc.	Meeker	Butler	sand — unspecified	My-61
	Weidle Sand & Gravel, Inc.	Weidle Sand & Gravel, Inc.	German	gravel — unspecified	My-41
Morgan	Chesterhill Stone Co.	Chesterhill Stone Co.	Windsor	gravel — unspecified	Mon-CS
				sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration	
				gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration	
				sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration	
				gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration	
Morrow	Chesterhill Stone Co.	Chesterhill Stone Co.	Windsor	gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration	Mon-CSC
				gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration	
				sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration	
				gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration	
Muskingum	Chesterhill Stone Co.	Chesterhill Stone Co.	Chester	sand — building, filtration	Mw-10
	Boyd Gravel Co.	Jennings-Lacy	Cass	gravel — building, road construction/resurfacing, filtration, ice control, landscaping	Mum-799
	Luburgh, Inc.	Luburgh Sand Pit	Falls	sand — building, portland cement concrete, asphaltic concrete, filtration	Mum-267
	Muskingum River Gravel Co.	Muskingum River Gravel Co.	Muskingum	gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration	Mum-262
		Muskingum River Gravel Co.	Wayne	sand — unspecified	Mum-228



## 1993 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY - Continued

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Muskingum (cont.)	Salt Creek Materials, Inc.	Salt Creek Materials, Inc.	Washington	sand - road construction/resurfacing, filtration gravel - road construction/resurfacing	Mum-216
	American Aggregates Corp.	Circleville #216	Circleville	sand - road construction/resurfacing gravel - road construction/resurfacing	Pky-1
	Darby Gravel Co.	Darby Gravel Co.	Darby	sand - fill	Pky-D
	William A. Hoffman, Jr.	Hoffman Pit	Wayne	gravel - screened sand - fill, bank run	Pky-H
	Richards Farms, Inc.	Richards Farms, Inc.	Circleville, Wayne	gravel - fill, bank run sand - unspecified	Pky-R
Pike	Eugene T. Wilson	Eugene T. Wilson	Darby	gravel - unspecified sand - building, bank run	Pky-W
	Chattin Concrete Gregory Materials Co.	Chattin Concrete Plant #1	Seal Scioto	gravel - bank run sand - unspecified	Pke-23 Pke-30
	Standard LaFarge	Cutlip	Scioto	sand - building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Pke-24
	Valley Materials Co.	Valley Materials Co.	Scioto	gravel - building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Pke-26
	American Sand & Gravel	American Sand & Gravel	Suffield	gravel - unspecified sand - unspecified	Pe-ASG
Portage	Aurora Sand & Gravel, Inc.	Aurora Sand & Gravel, Inc.	Aurora	gravel - asphaltic concrete, road construction/resurfacing sand - asphaltic concrete, road construction/resurfacing	Pe-84
	Beck Sand & Gravel, Inc.	Beck Sand & Gravel, Inc.	Shalersville	sand - unspecified gravel - unspecified	Pe-50
	Karl Brugmann Sand & Gravel, Inc.	Karl Brugmann Sand & Gravel, Inc.	Shalersville	sand - building gravel - building	Pe-15
	Oscar Brugmann Sand & Gravel, Inc.	Oscar Brugmann Sand & Gravel, Inc.	Shalersville	sand - unspecified gravel - unspecified	Pe-9
	Charlestown Sand & Gravel, Inc.	Charlestown Sand & Gravel, Inc.	Shalersville	gravel - building, bank run sand - building, bank run	Pe-17
	R. A. Cruise Sand & Gravel, Inc.	R. A. Cruise Sand & Gravel, Inc.	Charlestown	gravel - building, filtration, unspecified sand - building, asphaltic concrete	Pe-45
	Don's Dozer Service	Don's Dozer Service	Franklin, Ravenna	gravel - building, asphaltic concrete sand - fill	Pe-96
	Daniel Ebbe Trucking	Daniel Ebbe Trucking	Streetsboro	gravel - fill sand - road construction/resurfacing, bank run	Pe-E
	Green Oaks Potting Products, Inc. Hilltop Aggregate, Inc.	Green Oaks Potting Products, Inc. Hilltop Aggregate, Inc.	Brimfield	gravel - road construction/resurfacing, bank run sand - soil mix	Pe-89 Pe-56
	Hugo Sand Co.	Hugo Sand Co.	Franklin	sand - building, portland cement concrete, asphaltic concrete, road construction/resurfacing, backfill	Pe-10
	Jefferson Materials Co.	Howitt	Franklin	gravel - building, asphaltic concrete, road construction/ resurfacing, filtration, backfill	Pe-63
	Johnson Rd. Sand & Gravel, Inc.	Johnson Rd. Sand & Gravel, Inc.	Streetsboro	sand - building, road construction/resurfacing, other gravel - building, asphaltic concrete, road construction/ resurfacing	Pe-98
	R. G. Karg Development Co.	R. G. Karg Development Co.	Franklin	gravel - building, road construction/resurfacing sand - building	Pe-K
	Karg Sand & Gravel Co.	Karg Sand & Gravel Co.	Brimfield	sand - unspecified gravel - unspecified	Pe-83
	Lakeside Sand & Gravel Co.	Lakeside Sand & Gravel Co.	Brimfield	sand - pipe fill, bank run gravel - bank run	Pe-40
	Lucky Sand & Gravel Co.	Lucky Sand & Gravel Co.	Shalersville	sand - building, portland cement concrete gravel - building	Pe-L
	Miller Sand & Gravel Co.	Miller Sand & Gravel Co.	Mantua	sand - unspecified gravel - unspecified	Pe-39
	Miller Sand & Gravel Co.	Miller Sand & Gravel Co.	Windham	sand - building, soil mix gravel - building, driveway use	

Preble	Northern Ohio Materials, Inc.	Northern Ohio Materials, Inc.	Streetsboro	sand — building, portland cement concrete	Pe-85
	Rainbow Sand & Gravel, Inc.	Rainbow Sand & Gravel, Inc.	Shalersville	gravel — building	Pe-64
	Red Brush Peat Co.	Red Brush Peat Co.	Franklin	sand — unspecified	Pe-61
	S & S Aggregate, Inc.	Twin Lakes Sand, Inc.	Shalersville, Streetsboro	sand — fill, soil mix	Pe-59
	Schloss Materials Co.	Twin Lakes Sand, Inc.	Streetsboro	gravel — fill	Pe-67
	Sober Sand & Gravel Co.	Schloss Materials Co.	Mantua	sand — unspecified	Pe-60
	Solon Excavators Sand & Gravel, Inc.	Sober Sand & Gravel Co.	Rockstown	gravel — asphaltic concrete	Pe-18
	Standard Lafarge	Solon Excavators Sand & Gravel, Inc.	Mantua	sand — road construction/resurfacing	Pe-SE
	Sunshine Sand Co.	Shalersville	Shalersville	gravel — building	Pe-68
	Don Wartko Construction, Inc.	Shalersville Portable Sunshine Sand Co. Don Wartko Construction, Inc.	Shalersville Streetsboro Brimfield	sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Pe-SS1 Pe-SSC Pe-92
Richland	Loxley Aggregates, Inc.	Loxley Aggregates, Inc.	Twin	gravel — unspecified	Pre-9
	Southern Ohio Aggregates, Inc.	Southern Ohio Aggregates, Inc.	Gratis, Lanier	sand — building, filtration, fill	Pre-7
	Wysong Gravel Co.	Camden Plant	Somers	gravel — building, filtration	Pre-4
	Bolin & Bartley, Inc.	Bolin & Bartley Sand & Gravel	Weller	sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Pre-6
	D. H. Bowman & Sons, Inc.	D. H. Bowman & Sons, Inc.	Jefferson	gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Rd-20
	Ganges Gravel	Ganges Gravel	Cass	gravel — building, filtration	Rd-4
	John L. Garber Materials, Inc.	John L. Garber Materials, Inc.	Troy	sand — asphaltic concrete, backfill, pipe bedding	Rd-18
	Carroll Lifer Excavating, Inc.	Honey Creek Sand & Gravel	Jefferson	gravel — building	Rd-14
	Chillicothe Sand & Gravel Co.	Chillicothe Sand & Gravel Co.	Springfield	sand — unspecified	Rd-L
	David E. Edington	David E. Edington	Concord	gravel — building	Rs-27
Ross	Elm Spring Farm	Elm Spring Farm	Union	sand — building, road construction/resurfacing	Rs-E
	Haubeil & Sons Asphalt & Materials, Inc.	Haubeil & Sons Asphalt & Materials, Inc.	Springfield	gravel — building, road construction/resurfacing	Rs-26
	Muskingum River Gravel Co.	Muskingum River Gravel Co.	Jefferson	sand — building, road construction/resurfacing	Rs-H
	Ross County Gravel Co.	Ross County Gravel Co.	Scioto	gravel — road construction/resurfacing	Rs-M
	Tackett Builders	Tackett Builders	Springfield	gravel — unspecified	Rs-R
				sand — asphaltic concrete, unspecified	Rs-T
				gravel — asphaltic concrete, road construction/resurfacing	
				sand — building, road construction/resurfacing	
				gravel — building, road construction/resurfacing	
				ice control	

## 1993 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY - Continued

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Scioto	E. E. Blair Construcion Co.	Blair Pit	Porter	sand - unspecified	So-98
	Boone Coleman	Boone Coleman	Washington	gravel - unspecified	So-B
	Scioto Valley Resources	Scioto Valley Resources Division	Valley	sand - building	So-100
	Standard Lafarge	Haverhill	Green	sand - unspecified	So-79
Shelby				gravel - building, portland cement concrete, asphaltic concrete, road construction/resurfacing	
				gravel - building, portland cement concrete, asphaltic concrete, road construction/resurfacing	
	Fleckenstein Farm Gravel Pit	Fleckenstein Farm Gravel Pit	McLean	sand - fill	Shy-12
				gravel - fill	
	Miami River Stone Co.	Miami River Stone Co.	Orange	sand - unspecified	Shy-17
				gravel - unspecified	
	Sidney Sand & Gravel Co.	Staley Pit	Clinton, Salem	sand - bank run	Shy-SS
				gravel - bank run, backfill	
				gravel - bank run	Shy-13
	Spring Creek Corp.	Milligan & Milligan-Washington Twp. Pit	Washington	sand - bank run	Shy-11
		Pence Deposit	Washington	sand - portland cement concrete	
		Jones Deposit	Washington	gravel - portland cement concrete	Shy-18
		"H" Mine	Washington	sand - portland cement concrete, asphaltic concrete	Shy-SC
				gravel - portland cement concrete, asphaltic concrete	
Stark				gravel - portland cement concrete, asphaltic concrete	
	American Sand & Gravel	American Sand & Gravel	Jackson	sand - unspecified	Sk-203
				gravel - unspecified	
				sand - unspecified	Sk-243
				gravel - unspecified	
	Canton Aggregate (Div. of Central Allied Enterprises, Inc.)	Canton Aggregate	Jackson	sand - unspecified	Sk-689
				gravel - portland cement concrete, unspecified	
	A. J. Diana Sons, Inc.	Canton Aggregate	Plain	sand - portland cement concrete, asphaltic concrete, unspecified	Sk-681
		Neidert Pit	Lawrence	gravel - portland cement concrete, asphaltic concrete, unspecified	Sk-694
	Heiser Sand & Gravel	Heiser Sand & Gravel	Jackson	sand - unspecified	Sk-688
	Massillon Materials, Inc.	Massillon Materials, Inc.	Jackson	sand - building	Sk-MM
				gravel - building, asphaltic concrete, fill	
				gravel - building, asphaltic concrete, road construction/resurfacing, fill	
				sand - building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill	Sk-M
Summit				road construction/resurfacing, fill	
	Massillon Washed Gravel Co.	Massillon Washed Gravel Co.	Bethlehem	sand - building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill	Sk-607
	Northern Ohio Paving Co.	Northern Ohio Paving Co.	Perry	gravel - portland cement concrete, road construction/resurfacing	Sk-N
	Oster Sand & Gravel, Inc.	Massillon Plant	Jackson, Perry	sand - unspecified	Sk-165
				gravel - unspecified	
				sand - building, portland cement concrete, asphaltic concrete, ice control, fill	
				gravel - building, asphaltic concrete, road construction/resurfacing, ice control, fill	Sk-R
	Rupp Construction, Inc.	Rupp Construction, Inc.	Jackson	sand - building, unspecified	Sk-W
	Ralph C. Wagner & Sons	Ralph C. Wagner & Sons	Bethlehem	gravel - building, road construction/resurfacing, unspecified	St-52
	Fletcher Sand & Gravel, Inc.	Fletcher Sand & Gravel, Inc.	Norton	gravel - building, road construction/resurfacing, unspecified	St-39
	Lerkis Asphalt Co., Inc. & Subsidiary	Minor Rd. Plant	Copley	gravel - farm use	St-53
	Portage Lakes Sand & Gravel Co.	Portage Lakes Sand & Gravel Co.	Coventry	sand - unspecified	St-54
	R & S, Inc.	Copley Sand & Gravel	Copley	gravel - unspecified	St-24
	Riverside Sand & Gravel Co., Inc.	Riverside Sand & Gravel Co., Inc.	Stow, Tallmadge	gravel - building	
				sand - unspecified	
				gravel - unspecified	
				sand - unspecified	
				gravel - unspecified	
				gravel - building	
				sand - building	
				sand - building, asphaltic concrete, road construction/resurfacing	



Trumbull	Rubber City Sand & Gravel Co.	Rubber City Sand & Gravel Co.	Green	sand — building, portland cement concrete, filtration, fill gravel — building, portland cement concrete, road construction/ resurfacing, filtration, fill	St-9
	S & S Aggregate, Inc.	Twin Lakes Sand, Inc.	Coventry	sand — unspecified gravel — unspecified	St-44
Tuscarawas	Center West Enterprise, Inc. Nick's Trucking Samco, Inc.	Center West Enterprise, Inc. Nick's Trucking Springbrook	Warren Mesopotamia Mesopotamia	sand — other sand — unspecified sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill gravel — building, road construction/resurfacing	TI-C TI-N TI-12
	Benco Leasing, Inc.	Goshen Sand & Gravel	Goshen	sand — unspecified gravel — unspecified	Ts-1976
	Al Gasser Excavating, Inc. Larkin Sewer Contractors, Inc.	Al Gasser Excavating, Inc. Larkin Sewer Contractors, Inc.	Goshen Goshen	sand — unspecified sand — building gravel — building, filtration, base sand — asphaltic concrete, unspecified	Ts-G Ts-L
	Newton Asphalt Paving, Inc.	516	Dover	gravel — asphaltic concrete, unspecified	Ts-2001
	Oster Sand & Gravel, Inc.	Bolivar Plant	Lawrence	sand — building, portland cement concrete, asphaltic concrete, ice control, fill gravel — building, asphaltic concrete, road construction/ resurfacing, ice control, fill	Ts-1852
		Oster Sand & Gravel, Inc.	Sandy	sand — building, portland cement concrete, asphaltic concrete, fill, ice control gravel — building, asphaltic concrete, road construction/ resurfacing, fill, ice control	Ts-2036
	Soehnen Bros. Sand & Gravel, Inc.	Soehnen Bros. Sand & Gravel, Inc.	Wayne	sand — building, road construction/resurfacing, filtration, fill gravel — building, road construction/resurfacing, filtration	Ts-1826
	Spring Industries, Inc.	Midvale Pit	Goshen	sand — building, portland cement concrete, asphaltic concrete, ice control gravel — building, portland cement concrete, asphaltic concrete	Ts-1771
	Stewart & Reichman, Inc.	Hardy Salt Stewart & Reichman, Inc.	Goshen, Warwick Warwick	gravel — building, portland cement concrete, asphaltic concrete sand — portland cement concrete, asphaltic concrete sand — road construction/resurfacing	Ts-SI Ts-111
	Stocker Sand & Gravel Co.	Stocker Sand & Gravel Co.	Clay	gravel — road construction/resurfacing	Ts-69
		Stocker Sand & Gravel Co.	Clay	gravel — building, road construction/resurfacing sand — building, road construction/resurfacing	Ts-125
	Zink Petroleum Corp. (dba State Rte. 416 Sand & Gravel)	State Rte. 416 Sand & Gravel	Goshen	gravel — building, road construction/resurfacing sand — building, portland cement concrete, fill gravel — building, portland cement concrete, road construction/ resurfacing, filtration	Ts-2018
Warren	American Aggregates Corp.	Franklin #714	Franklin	sand — road construction/resurfacing	Wan-38
	Embro, Inc.	Embro, Inc.	Franklin	gravel — road construction/resurfacing sand — building	Wan-7
	Paul N. Herdman	Paul N. Herdman	Salem	gravel — building sand — unspecified	Wan-46
	L & I Natural Resources, Inc.	L & I Pit & Mill	Union	gravel — unspecified sand — unspecified	Wan-50
	Morrow Gravel Co.	Morrow Gravel Co.	Hamilton	gravel — building, road construction/resurfacing sand — unspecified	Wan-M
		Morrow Gravel Co.	Salem	gravel — unspecified sand — unspecified	Wan-M2
	Carl E. Oeder & Sons Sand & Gravel	Carl E. Oeder & Sons Sand & Gravel	Union	gravel — unspecified sand — unspecified	Wan-41
	Watson Gravel, Inc.	Mason Pit	Union	gravel — unspecified sand — building gravel — building	Wan-10
Washington	Atlas Towing Co.	Belpre Bank Run	Belpre	sand — unspecified gravel — unspecified	Wn-54
	Briggs Sand & Gravel, Inc.	Briggs Sand & Gravel, Inc.	Warren	sand — building gravel — road construction/resurfacing	Wn-508
	M & J Sand & Gravel, Inc. Muskingum River Gravel Co.	M & J Sand & Gravel, Inc. Plant #2	Newport Grandview	sand — unspecified sand — unspecified gravel — unspecified	Wn-M Wn-38

## 1993 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY — Continued

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Washington (cont.)	Trout Sand & Gravel Co.	Trout Sand & Gravel Co.	Warren	sand — building	Wn-510
	Mark Williams Blacktop Co., Inc.	Williams Pit #1	Warren	gravel — building	Wn-1007
	Buckeye Excavating E. A. Construction, Inc.	Steiner Pit E. A. Construction, Inc.	Canaan Clinton	sand — building, asphaltic concrete, filtration	We-23 We-24
	Prairie Lane Sand & Gravel Co.	Prairie Lane Sand & Gravel Co.	Franklin	gravel — building	We-11
Wayne	Rupp Construction, Inc.	Rupp Construction, Inc.	Baughman	gravel — driveway use	We-7
				sand — building, road construction/resurfacing	
				sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, unspecified	
				gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, unspecified	We-15
Williams	Zollinger Sand & Gravel Co.	Zollinger Sand & Gravel Co.	Chippewa	sand — unspecified	
	Stoneco, Inc. Weber Sand & Gravel, Inc.	South Montpelier Weber Sand & Gravel, Inc.	Superior St. Joseph	gravel — unsurfaced	Ws-6 Ws-11
Wood	G. M. Sader Excavating & Paving, Inc.	G. M. Sader Excavating & Paving, Inc.	Plain	sand — portland cement concrete, asphaltic concrete, filtration	Wd-13
Wyandot	Kirby's Sand & Gravel, Inc.	Kirby's Sand & Gravel, Inc.	Eden	sand — building, portland cement concrete	Wt-17
			Eden	gravel — building, fill	Wt-K
	National Lime & Stone Co.	Kirby's Sand & Gravel, Inc.	Eden	sand — building, road construction/resurfacing, filtration	Wt-15 <sup>4</sup>
	Precision Aggregate, Inc.	Upper Sandusky Plant Precision Aggregate, Inc.	Eden	gravel — building, road construction/resurfacing, foundry	Wt-4
			Crane, Eden	gravel — building, road construction/resurfacing, filtration	
				sand — building, road construction/resurfacing, filtration	
				gravel — building, road construction/resurfacing, filtration	
				gravel — building, road construction/resurfacing, foundry	
				sand — building, road construction/resurfacing, filtration	
				gravel — building, portland cement concrete, asphaltic concrete	
				sand — portland cement concrete	
				gravel — building, portland cement concrete	

<sup>4</sup>Information for Wt-15 includes information for Wt-5 and Wt-18.

**1993 SANDSTONE/CONGLOMERATE COMPANIES WITH  
SALES OR PRODUCTION**

Company	No. of operations	Sales (tons)	Production (tons)
Best Sand Corp.	1	648,756	759,337
Boyas Excavating, Inc.	1	2,600	0
Briar Hill Stone Co.	7	21,104	21,104
Central Silica Co.	2	538,720	538,720
Cleveland Quarries Co.	2	3,913	3,913
D. & D. Mining Co.	1	946	946
Gwin Contracting Co.	1	8,970	8,970
Keeney Sand & Stone, Inc.	1	60,800	60,800
Kimble Clay & Limestone Co.	1	14,210	14,210
L & M Mineral Co.	1	5,949	5,949
Leetonia Sand & Gravel Co., Inc.	1	2,289	2,289
Mesenburg Bros., Inc.	1	26,171	26,171
Newbury Sand & Gravel	1	24,953	32,853
Penn Eagle Coal Corp.	1	853	853
Riverside Sand & Gravel Co., Inc.	1	3,165	3,165
Schrader Sand & Gravel	1	37,377	42,092
R. W. Sidley, Inc.	2	318,325	318,325
Sidwell Bros., Inc.	1	794	794
Slankard Dozer Service, Inc.	1	1,940	1,940
Southern Silica, Inc.	1	174,071	174,071
U.S. Silica Co.	1	16,348	16,348
Waller Bros. Stone Co.	2	13,481	13,481
Frank Widmor Coal Co.	1	7,524	7,524
<b>TOTAL: 23 companies</b>	<b>33</b>	<b>1,933,259</b>	<b>2,053,855</b>



## 1993 OHIO DIRECTORY OF SANDSTONE/CONGLOMERATE MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

For those mines for which the Division of Mines has not assigned a state mine number, a letter designation is used (example: Gea-N).

County	Name of operator	Name of quarry	Township	Geological unit	Type and principal use	State mine number
Belmont	Frank Widmor Coal Co.	Bellaire Stone	Pultney		crushed or broken stone — riprap	Bt-1190
Columbiana	D. & D. Mining Co. Leetonia Sand & Gravel Co., Inc.	D. & D. Mining Co. Leetonia Sand & Gravel Co., Inc.	Unity Salem		crushed or broken stone — construction crushed or broken stone — riprap	Ca-888 Ca-982
Coshocton	Briar Hill Stone Co.	Quarry #26 Quarry #32 Quarry #24 Quarry #55 Quarry #18 Quarry #3	Monroe Monroe Monroe Monroe New Castle Tiverton	Massillon (Pennsylvanian) Massillon (Pennsylvanian) Massillon (Pennsylvanian) Massillon (Pennsylvanian) Massillon (Pennsylvanian) Massillon (Pennsylvanian)	dimension stone — rough construction dimension stone — rough construction dimension stone — rough construction dimension stone — rough construction dimension stone — rough construction dimension stone — rough construction	Cn-13 Cn-686 Cn-692 Cn-815 Cn-695 Cn-659
Cuyahoga	Boyas Excavating, Inc.	Boyas' Valley View Quarry	Independence	Bedford (Mississippian)	crushed or broken stone — riprap, construction, other	Cya-42
Erie	Cleveland Quarries, L.P.	Birmingham Quarry	Florence	Berea (Mississippian)	dimension stone — unspecified	Ee-21
Geauga	Best Sand Corp.	Best Sand Corp.	Munson	Sharon conglomerate (Pennsylvanian)	crushed or broken stone — foundry sand, glass sand, metallurgical pebble, refractory, aggregate, fire and furnace sand, polishing/grinding sand, engine sand, frac sand, construction, filtration, filler, extender, turf, landscape use, pool filter	Gea-3
	Newbury Sand & Gravel R. W. Sidley, Inc.	Newbury Sand & Gravel R. W. Sidley, Inc. Thompson Pit	Burton Hambden Thompson	Sharon conglomerate (Pennsylvanian)	crushed or broken stone — riprap, construction crushed or broken stone — unspecified crushed or broken stone — unspecified	Gea-N Gea-S Gea-1
Huron	Mesenburg Bros., Inc.	Mesenburg Bros., Inc.	Townsend	Berea (Mississippian)	crushed or broken stone — riprap	Hrn-8
Jefferson	Penn Eagle Coal Corp.	B & S Mine	Saline		crushed or broken stone — riprap	Jfn-PE
Knox	Briar Hill Stone Co. Central Silica Co.	Quarry #6 Millwood Sand Division	Jefferson Union	Massillon (Pennsylvanian) Black Hand (Mississippian)	dimension stone — rough construction crushed or broken stone — foundry sand, glass sand, silica flour, engine sand, frac sand, other	Kx-12 Kx-1
Lake	Keeney Sand & Stone, Inc.	Keeney Sand & Stone, Inc.	Leroy		crushed or broken stone — aggregate, construction	Lke-K
Lorain	Cleveland Quarries, L.P.	Amherst Quarries	Amherst	Berea (Mississippian)	crushed or broken stone — riprap dimension stone — rough architectural, unspecified	Ln-3
Mahoning	Gwin Contracting Co.	Gwin Contracting Co.	Milton	Sharon sandstone (Pennsylvanian)	crushed or broken stone — fractured laminated sand rock	Mg-62
Perry	Central Silica Co.	Glass Rock	Hopewell	Massillon (Pennsylvanian)	crushed or broken stone — foundry sand, glass sand, silica flour, other	Py-344
Pike	Schrader Sand & Gravel	Schrader Sand & Gravel	Jackson	Sharon conglomerate (Pennsylvanian)	crushed or broken stone — foundry sand, glass sand, metallurgical pebble, construction	Pke-31
Ross	Southern Silica, Inc.	Southern Silica, Inc.	Jefferson	Sharon conglomerate (Pennsylvanian)	crushed or broken stone — foundry sand, glass sand, refractory, engine sand, fill, filtration	Rs-16
Scioto	Waller Bros. Stone Co.	Inskeep Quarry Crabtree Quarry	Rush Morgan, Rush, Union	Buena Vista (Mississippian)	dimension stone — rough construction dimension stone — rough construction	So-48 So-76
Summit	Riverside Sand & Gravel Co., Inc.	Riverside Sand & Gravel Co., Inc.	Stow, Tallmadge		crushed or broken stone — aggregate	St-24
Trumbull	Sidwell Bros., Inc.	Hard Rocks	Kinsman		crushed or broken stone — aggregate	Tl-13
Tuscarawas	Kimble Clay & Limestone Co. L & M Mineral Co. Slankard Dozer Service, Inc. U.S. Silica Co.	Kimble Clay & Limestone Co. Spring Beach City Pit Coxey Works	Dover Mill, Warwick Franklin Wayne	Massillon (Pennsylvanian)	crushed or broken stone — refractory, construction crushed or broken stone — riprap, aggregate crushed or broken stone — construction, other crushed or broken stone — fire and furnace sand	Ts-1818 Ts-1982 Ts-2032 Ts-1660

## 1993 CLAY COMPANIES WITH SALES OR PRODUCTION

Company	No. of operations	Sales (tons)	Production (tons)
American Landfill, Inc.	1	297,970	297,970
Athens Hocking Reclamation Center	1	945	945
Beaver Excavating, Inc.	1	80,000	80,000
Belden Brick Co.	5	154,593	154,593
Belville Mining Co., Inc.	1	27,885	27,885
Blue Jay Enterprises of Tuscarawas Co., Inc.	1	40,956	40,956
Buckeye-Industrial Mining Co.	2	13,208	13,208
Carter & Carter, Inc.	1	50	50
Cedar Heights Clay Co.	3	53,817	53,817
Clark Clay Co.	1	2,907	1,605
D. & D. Mining Co.	1	35,786	35,786
Dennis Clay Co.	3	35,392	35,392
James E. Downard	1	165	165
John James Estes & Assoc., Inc.	1	21,000	21,000
David L. Florence	1	5,529	5,529
General Clay Products Corp.	2	40,575	40,575
Green Basin Coal, Inc.	1	50,453	39,581
Green Oaks Potting Products, Inc.	1	198	198
Holmes Limestone Co.	2	50,642	50,642
Kimble Clay & Limestone Co.	1	43,815	117,432
L & M Mineral Co.	1	20,200	20,200
Lafarge Corp.	1	177,656	177,656
Loxley Aggregates, Inc.	1	762	762
Mitchell Transport, Inc.	1	2,900	2,900
Moore's Excavating Co.	1	58	58
Nutter Bros. Coal Co., Inc.	1	38,718	38,718
Penn Eagle Coal Corp.	1	43,823	43,823
Rash Energy, Inc.	1	24,000	24,000
Red Brush Peat Co.	1	734	734
S. K. Construction Co.	1	88,711	88,711
Sandkuhl Tile Co., Inc.	1	5,830	5,830
Seaway Sand & Stone, Inc.	1	178	178
Solomon's Mines, Inc.	1	7,605	7,605
Soltis Sand & Gravel	1	334	334
State Line Resources, Inc.	1	39,554	39,554
Stone Creek Brick Co.	1	32,077	32,077
Swingle Drilling, Inc.	1	3,240	3,240
Valley Clay Mining Co.	1	7,339	3,169
Waste Management of Ohio, Inc.	1	45,350	45,350
Waterloo Coal Co., Inc.	1	2,510	2,510
Weidle Sand & Gravel, Inc.	1	143,464	143,464
Brush Wellman, Inc.	1	62,000	62,000
Frank Widmor Coal Co.	1	7,072	7,072
Zoar Mining Co.	1	1,082	1,082
TOTAL: 44 companies	55	1,711,083	1,768,356

## 1993 OHIO DIRECTORY OF CLAY-MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

For those mines for which the Division of Mines has not assigned a state mine number, a letter designation is used (example: Br-SK).

County	Name of operator	Name of mine or quarry	Township	Geological unit	Principal use	State mine number
Athens	Athens Hocking Reclamation Center	Athens Hocking Reclamation Center	York		oil and gas well plugging material	As-594
Auglaize	Sandkuhl Tile Co., Inc.	Sandkuhl Tile Co., Inc.	Salem	Pleistocene glacial clay	common clay products	Ae-7
Belmont	Frank Widmor Coal Co.	Bellaire Stone	Pulney		common clay products	Bt-1190
Butler	S. K. Construction Co.	Ron Chrisman Farm	Madison		common clay products	Br-56
Carroll	Buckeye-Industrial Mining Co.	Buckeye-Industrial Mining Co.	Rose	No. 5 clay (Pennsylvanian)	refractories	Cl-B
Champaign	Moore's Excavating Co.	Moore's Excavating Co.	Salem		common clay products, construction	Cpn-20
Columbiana	D. & D. Mining Co.	D. & D. Strip	Unity		common clay products, refractories	Ca-348
	State Line Resources, Inc.	State Line Resources, Inc.	Middleton		common clay products, glazed ware	Ca-505
Coshocton	General Clay Products Corp.	Drescher Pit	Crawford	No. 5 clay (Pennsylvanian)	common clay products	Cn-787
Fairfield	James E. Downard	James E. Downard	Rush Creek		fill	Fd-16
Geauga	Soltis Sand & Gravel	Soltis Sand & Gravel	Parkman		unspecified	Gea-9
Hocking	General Clay Products Corp.	General Clay Products Corp.	Falls Gore	No. 5 fire clay (Pennsylvanian)	vitrified products	Hg-205
Holmes	Clark Clay Co.	Clark Clay Co.	Hardy	Putnam Hill (Pennsylvanian)	common clay products	Hs-56
	Holmes Limestone Co.	241 Plant	Hardy	Brookville & Putnam Hill (Pennsylvanian)	common clay products	Hs-67
Jackson	Cedar Heights Clay Co. (Div. of Resco Products, Inc.)	Cedarloo/Jenkins/Greer	Madison	No. 5 clay (Pennsylvanian)	common clay products	Jkn-1007
		Katie Walke	Jefferson		common clay products	Jkn-CH
		Sadler	Jefferson		common clay products	Jkn-CH1
		Waterloo-Zoar Quarry	Bloomfield, Madison	No. 5 & No. 6 clays (Pennsylvanian)	unspecified	Jkn-367
Jefferson	Waterloo Coal Co., Inc.	B & S Mine	Saline		common clay products	Jfn-PE
Lake	Penn Eagle Coal Corp.	North Park Reclamation Clay Center	Painesville		landfill use	Lke-M
Lawrence	Mitchell Transport, Inc.	Belville Mining Co., Inc.	Washington	Clarion & No. 5 clays (Pennsylvanian)	common clay products, refractories, unspecified	Le-B
Lucas	Seaway Sand & Stone, Inc.	Seaway Sand & Stone, Inc.	Swanton		common clay products	Ls-13
Mahoning	Solomon's Mines, Inc.	Solomon's Mines, Inc.	Green		construction	Mg-632
Montgomery	Carter & Carter, Inc.	Carter & Carter, Inc.	Miami		common clay products	My-CW
	Weidle Sand & Gravel, Inc.	Weidle Sand & Gravel, Inc.	Jefferson		common clay products	My-W
Muskingum	Dennis Clay Co.	Ohio Power	Newton		common clay products	Mum-903
	Valley Clay Mining Co.	Kimpel Mine	Newton	Tonestia & Brookville clays (Pennsylvanian)	common clay products	Mum-904
Ottawa	Brush Wellman, Inc.	Brush Wellman Clay Mine	Harris		construction	Oa-BW
Paulding	Lafarge Corp.	Paulding Quarry	Crane	Detroit River & upper Dundee (Devonian)	cement manufacture	Pg-1
Perry	Dennis Clay Co.	Dennis Clay Co.	Harrison	No. 5 clay (Pennsylvanian)	common clay products	Py-DCC
	Nutter Bros. Coal Co., Inc.	Dennis Clay Co.	Monday Creek		common clay products	Py-338
	Swingle Drilling, Inc.	Nutter Bros. Coal Co., Inc.	Harrison		common clay products	Py-N
		T. G. Industries, Inc.	Harrison		common clay products, unspecified	Py-S1
Pike	John James Estes & Assoc., Inc.	John James Estes & Assoc., Inc.	Seal		construction	Pke-J
Portage	Green Oaks Potting Products, Inc.	Green Oaks Potting Products, Inc.	Franklin		construction	Pe-89
	Red Brush Peat Co.	Red Brush Peat Co.	Franklin		fill	Pe-61
Preble	Loxley Aggregates, Inc.	Loxley Aggregates, Inc.	Twin		baseball diamond	Pre-9
Stark	American Landfill, Inc.	American Landfill, Inc.	Sandy	No. 5 & No. 6 clays (Pennsylvanian)	landfill use	Sk-246
	Beaver Excavating, Inc.	Cable Job	Canton		construction	Sk-BE
	Buckeye-Industrial Mining Co.	Bolivar Mine	Onaburg	No. 5 clay (Pennsylvanian)	common clay products	Sk-247
	Holmes Limestone Co.	Countywide RDF	Bethlehem	Brookville (Pennsylvanian)	common clay products	Sk-235
	Waste Management of Ohio, Inc.	Wallick Pit	Bethlehem, Pike	No. 5 & No. 6 clays (Pennsylvanian)	landfill use	Sk-217
Tuscarawas	Belden Brick Co.	Wallick Pit	Franklin, Wayne	Brookville (Pennsylvanian)	common clay products	Ts-1841
		Moomaw Pit	Sugar Creek	Brookville (Pennsylvanian)	common clay products	Ts-1517
		Belden Pit	Sugar Creek	Brookville & Lower Kittanning (Pennsylvanian)	common clay products	Ts-1646
		Shanesville Pit	Sugar Creek	Brookville (Pennsylvanian)	common clay products	Ts-1939
		Beagle Pit	Sugar Creek	Brookville (Pennsylvanian)	common clay products	Ts-1960



	Blue Jay Enterprises of Tuscarawas Co., Inc. Green Basin Coal, Inc. Kimble Clay & Limestone Co.	Swonger-Waltz Mine Blackhawk Kimble Clay & Limestone Co.	Sandy Lawrence Dover		common clay products, refractories other common clay products, refractories common clay products vitrified products common clay products construction common clay products	Ts-520 Ts-2024 Ts-1818 Ts-1982 Ts-1557 Ts-540 Wn-F We-R
Washington Wayne	L & M Mineral Co. Stone Creek Brick Co. Zoar Mining Co. David L. Florence Rash Energy, Inc.	Spring Stone Creek Clay Mine Zoar Mining Co. David L. Florence Rash Energy, Inc.	Mill, Warwick Jefferson Sandy Warren Paint	Vanport (Pennsylvanian)    No. 6 clay (Pennsylvanian)		

1993 SHALE COMPANIES WITH SALES OR PRODUCTION

Company	No. of operations	Sales (tons)	Production (tons)
American Landfill, Inc.	1	87,897	87,897
Belden Brick Co.	4	231,214	231,214
Blue Jay Enterprises of Tuscarawas Co., Inc.	1	12,628	12,628
Bowerson Shale Co.	2	60,577	60,577
Buckeye-Industrial Mining Co.	1	4,915	4,915
D. & D. Mining Co.	1	5,707	5,707
Dennis Clay Co.	2	50,935	50,935
Dome Minerals, Inc.	1	6,871	6,871
E.M.A.I. Corp. dba ESSROC Materials, Inc.	2	122,452	122,452
General Clay Products Corp.	4	77,385	77,385
Glen-Gery Corp.	1	161,385	161,385
Green Basin Coal, Inc.	1	80,000	80,000
Holmes Limestone Co.	1	3,193	3,193
Hydraulic Press Brick Co.	1	209,333	209,333
Janson's Soil Service, Inc.	1	350	350
Board of Knox County Commissioners	1	9,016	9,016
L & M Mineral Co.	3	35,509	35,509
London Tile Co.	1	1,252	1,252
Midwest Portland Cement Corp.	1	38,070	38,070
Rash Energy, Inc.	1	24,000	24,000
Richland Moulded Brick Co.	1	6,785	6,785
Stone Creek Brick Co.	1	4,477	4,477
Summitville Tiles, Inc.	2	31,420	31,420
Towne Square Products	1	425	425
Frank Widmor Coal Co.	1	35,620	37,139
TOTAL: 25 companies	37	1,301,416	1,302,935

## 1993 OHIO DIRECTORY OF SHALE-MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

For those mines for which the Division of Mines has not assigned a state mine number, a letter designation is used (example: Kx-K).

County	Name of operator	Name of mine	Township	Geological unit	Principal use	State mine number
Ashland	London Tile Co.	Biglow	Ruggles	Bedford (Mississippian)	common clay products	Ald-1
Ashtabula	Janson's Soil Service, Inc.	Janson's Soil Service, Inc.	Morgan		construction	Asa-14
Belmont	Frank Widmor Coal Co.	Bellaire Stone	Pultney		construction	Bt-1190
Columbiana	D. & D. Mining Co. Dome Minerals, Inc.	D. & D. Mining Co. Dome Minerals, Inc.	Unity Franklin		construction common clay products, paving	Ca-888 Ca-947
	Summitville Tiles, Inc.	Summitville Tiles, Inc. Summitville Tiles, Inc.	Franklin Franklin		common clay products common clay products	Ca-205 Ca-989
Coshocton	General Clay Products Corp.	Drescher Pit	Crawford	Lower Kittanning (Pennsylvanian)	common clay products	Cn-787
Cuyahoga	Hydraulic Press Brick Co.	Hydraulic Press Brick Co.	City of Independence	Chagrin (Devonian)	lightweight aggregate	Cya-19
Harrison	Bowerston Shale Co.	Bowerston	Monroe	Conemaugh (Pennsylvanian)	vitrified products	Hn-152
Hocking	General Clay Products Corp.	General Clay Products Corp. General Clay Products Corp.	Falls Gore Starr	No. 5 fire clay (Pennsylvanian)	vitrified products common clay products	Hg-205 Hg-330
Holmes	Holmes Limestone Co.	241 Plant	Hardy	Brookville & Vanport (Pennsylvanian)	common clay products	HS-67
Knox	Board of Knox County Commissioners	Board of Knox County Commissioners	Brown		construction	Kx-K
Licking	Bowerston Shale Co.	Hanover	Hanover	Logan (Mississippian)	vitrified products	Lg-501
Mahoning	E.M.A.I. Corp. dba ESSROC Materials, Inc.	Bessemer Pit	Poland	Vanport (Pennsylvanian)	cement manufacture	Mg-608
		Carbon Pit	Poland, Springfield		cement manufacture	Mg-EM
Marion	Glen-Gery Corp.	Glen-Gery Corp.	Tully	Bedford (Mississippian)	common clay products	Mn-7
Medina	General Clay Products Corp.	General Clay Products Corp.	Wadsworth		common clay products	Ma-6
Muskingum	Dennis Clay Co. Midwest Portland Cement Corp.	Ohio Power Lyle Quarry	Newton Newton		common clay products cement manufacture	Mum-903 Mum-24
Noble	Towne Square Products	Towne Square Products	Buffalo		common clay products	Ne-66
Perry	Dennis Clay Co.	Dennis Clay Co.	Monday Creek		common clay products	Py-338
Richland	Richland Moulded Brick Co.	Richland Moulded Brick Co.	Franklin, Weller	Bedford (Mississippian)	common clay products	Rd-R
Stark	American Landfill, Inc. Buckeye-Industrial Mining Co.	American Landfill, Inc. Cable Job	Sandy Osnaburg	Lower & Middle Kittanning (Pennsylvanian)	landfill use common clay products	Sk-246 Sk-247
Tuscarawas	Belden Brick Co.	Wallick Pit Moomaw Pit Belden Pit Shanesville Pit Swonger-Waltz Mine	Franklin, Wayne Sugar Creek Sugar Creek Sugar Creek Sandy	Brookville (Pennsylvanian) Brookville & Tionesta (Pennsylvanian) Brookville & Tionesta (Pennsylvanian) Brookville (Pennsylvanian)	common clay products common clay products common clay products common clay products common clay products	Ts-1841 Ts-1517 Ts-1646 Ts-1939 Ts-520
	Blue Jay Enterprises of Tuscarawas Co., Inc. Green Basin Coal, Inc. L & M Mineral Co.	Blawkhawk Evans Spring Rainsberg Stone Creek Shale Pit	Lawrence Mill, Rush, Warwick Mill, Warwick Rush Jefferson		construction common clay products common clay products common clay products vitrified products	Ts-2024 Ts-1884 Ts-1982 Ts-H1 Ts-1558
Wayne	Stone Creek Brick Co. Rash Energy, Inc.	Stone Creek Shale Pit Rash Energy, Inc.	Paint		common clay products	We-R

**1993 OHIO DIRECTORY OF SALT-MINE AND SALT-BRINING-PLANT OPERATORS  
REPORTING SALES OR PRODUCTION, BY COUNTY**

County	Name of operator	Name of mine	Township	Geological unit and product	State mine number
Cuyahoga	Akzo Salt, Inc.	Cleveland Mine	City of Cleveland	Salina (Silurian) — rock salt	Cya-30
Lake	Morton International, Inc. Morton Salt Div.	Fairport Mine	Painesville	Salina (Silurian) — rock salt	Lke-6
Licking	R. H. Penick Co.	R. H. Penick Co.	Newark	"Newburg" (Silurian) — natural brine	Lg-45
Summit	Akzo Salt, Inc.	Akzo Salt, Inc.	Coventry	Salina (Silurian) — artificial brine	St-9127
Wayne	Morton International, Inc., Morton Salt Div.	Morton Salt Well Field	Milton	Salina (Silurian) — artificial brine	We-9129

**1993 OHIO DIRECTORY OF GYPSUM-MINE OPERATORS REPORTING SALES OR PRODUCTION**

County	Name of operator	Name of mine	Township	Geological unit	State mine number
Ottawa	Celotex Corp.	American #2	Portage	Silurian	Oa-2

**1993 OHIO DIRECTORY OF PEAT-MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY**

County	Name of operator	Name of mine	Township	Type and principal use	State mine number
Champaign	Sphagnum Moss Peat Farm	Sphagnum Moss Peat Farm	Harrison	mulch, humus — worm culture	Cpn-9
Portage	Green Oaks Potting Products, Inc. Red Brush Peat Co.	Green Oaks Potting Products, Inc. Red Brush Peat Co.	Franklin Franklin	mulch, soil mix soil mix	Pe-89 Pe-61
Williams	Lingvai Peat Co.	Lingvai Peat Co.	Center	mulch	Ws-17



**NUMERICAL INDEX OF OPERATORS OF MINES  
SHOWN ON 1993 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY**

COAL ● ○

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
3	Belmont	Bt-68	D-0360	Ohio Valley Coal Co.
13	Belmont	Bt-147	D-0022	Marietta Coal Co.
19	Belmont	Bt-927	D-0483	Fairpoint Coal Co.
27	Belmont	Bt-1074	D-0340	Ohio River Collieries, Inc.
38	Belmont	Bt-1104	D-0088	Marietta Coal Co.
58	Belmont	Bt-1129	D-0491	Marietta Coal Co.
61	Carroll	Cl-162	D-0408	James Bros. Coal Co.
123	Coshocton	Cn-779	D-0320	R & F Coal Co.
124	Coshocton	Cn-768	D-0208	R & F Coal Co.
144	Harrison	Hn-738	D-0376	W. B. Coal Co., Inc.
146	Harrison	Hn-217	D-0440	Varkony Mining Co.
150	Harrison	Hn-700	D-0826 et al.	Consolidation Coal Co.
161	Holmes	Hs-67	IM-3, IM-768	Holmes Limestone Co.
164	Holmes	Hs-86	D-0193 et al.	Holmes Limestone Co.
165	Jackson	Jkn-367	D-0205 et al.	Waterloo Coal Co., Inc.
178	Jefferson	Jfn-528	D-0247, D-0563, D-0803, D-0873	Boich Mining Co.
180	Jefferson	Jfn-687	D-0404, D-0939	Weirton Construction Co.
181	Jefferson	Jfn-831	D-0843	Penn Eagle Coal Corp.
185	Jefferson	Jfn-780	D-0126	D & L Contractors, Inc.
186	Jefferson	Jfn-784	D-0091, D-0728	F. & M. Coal Co.
189	Jefferson	Jfn-788	D-0327, D-0983	Anthony Mining Co., Inc.
205	Mahoning	Mg-65	D-0374	Thompson Bros. Mining Co.
212	Meigs, Vinton	Ms-293	D-0354, D-0463	Southern Ohio Coal Co.
213	Meigs	Ms-294	D-0355	Southern Ohio Coal Co.
215	Monroe	Me-4	D-0433	Quarto Mining Co. (Subsidiary of Consolidation Coal Co.)
228	Morgan, Muskingum, Noble	Ne-41	D-0839 et al.	Central Ohio Coal Co.
239	Perry	Py-317	D-0057 et al.	Crooksville Coal Co., Inc.
246	Stark	Sk-208	D-0295, D-0827, D-1005, D-1015	ENZ, Inc.
256	Tuscarawas	Ts-115	D-0190 et al.	Costain Coal, Inc.
258	Tuscarawas	Ts-540	IM-28	Zoar Mining Co.
261	Tuscarawas	Ts-1646	IM-44	Belden Brick Co.
262	Tuscarawas	Ts-1727	IM-9	Kimble Clay & Limestone Co.
264	Tuscarawas	Ts-1884	IM-6	L & M Mineral Co.
267	Tuscarawas	Ts-1914	D-0701	L & M Mineral Co.
300	Meigs, Vinton	Ms-293	D-0354, D-0463	Southern Ohio Coal Co.
314	Belmont, Guernsey	Gy-304	D-0262	R & F Coal Co.
357	Vinton	Vn-172	D-0445	Benedict, Inc.
363	Stark	Sk-235	IM-945, D-0865	Holmes Limestone Co.
375	Tuscarawas	Ts-1996	D-0612	J D Mining, Inc.
398	Coshocton	Cn-820	D-0623	R & F Coal Co.
399	Jefferson	Hn-255	D-0593	R & F Coal Co.
401	Jefferson	Jfn-807	D-0642	Valley Mining, Inc.
411	Tuscarawas	Ts-1982	IM-621	L & M Mineral Co.
418	Vinton	Vn-182	D-0631	R. A. Eberts Co., Inc.
419	Vinton	Vn-183	D-0633	Benedict, Inc.
420	Vinton	Vn-184	D-0524, D-0609	Benedict, Inc.
423	Vinton	Vn-187	D-0672	Benedict, Inc.
433	Tuscarawas	Ts-1991	D-0702	Daron Coal Co., Inc.
441	Columbiana	Ca-348	IM-976, D-1002	D. & D. Mining Co.
447	Carroll	Cl-238	D-0703	Buckeye-Industrial Mining Co.
452	Belmont	Bt-1164	D-0742	Marietta Coal Co.
456	Belmont	Bt-1168	D-0619	R & F Coal Co.
471	Columbiana	Ca-950	D-0768	Blum Coal Co.
472	Columbiana	Ca-951	D-0741	Commercial Minerals, Inc.
489	Jefferson	Jfn-813	D-0740	Valley Mining, Inc.
491	Lawrence	Le-B	IM-1188, D-0746	Belville Mining Co., Inc.
493	Noble	Ne-1008	D-0706	B & N Coal, Inc.
495	Noble	Ne-150	D-0787	B & N Coal, Inc.
508	Tuscarawas	Ts-DW	D-0792	R & F Coal Co.
509	Tuscarawas	Ts-K3	D-0729	Kimble Clay & Limestone Co.
510	Tuscarawas	Ts-2007	D-0737	Red Malcuit, Inc.
513	Vinton	Vn-S	D-0793	Sands Hill Coal Co., Inc.

**NUMERICAL INDEX OF OPERATORS OF MINES  
SHOWN ON 1993 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY – Continued**

**COAL – Continued**

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
514	Noble	Ne-151	D-0807	B & N Coal, Inc.
519	Belmont	Bt-1179	D-0840	K.C.C.I.
523	Belmont	Bt-1183	D-0845	Marietta Coal Co.
524	Belmont	Bt-1184	D-0799	Joyce Coal Co., Inc.
528	Columbiana	Ca-985	D-0821	Double "R" Mining
529	Columbiana	Ca-978	D-0874	Buckeye-Industrial Mining Co.
532	Coshocton	Cn-PA	D-0850	R & F Coal Co.
534	Guernsey	Gy-310	D-0842	Costain Coal, Inc.
537	Harrison	Hn-MN	D-0772	R & F Coal Co.
538	Holmes	Hs-97	D-0775, D-0885	Holmes Limestone Co.
541	Jackson, Vinton	Jkn-SH	D-0861, IM-1068	Sands Hill Coal Co., Inc.
544	Jefferson	Jfn-817	D-0860	R & F Coal Co.
551	Noble	Ne-152	D-0859	King Quarries, Inc.
556	Tuscarawas	Ts-2006	D-0800	Red Malcuit, Inc.
559	Tuscarawas	Ts-2010	D-0849	Miller Mining, Inc.
560	Tuscarawas	Ts-2011	D-0822	Valley Mining, Inc.
564	Jackson, Vinton	Vn-192	D-0207	R. A. Eberts Co., Inc.
568	Belmont	Bt-1188	D-0908	R & F Coal Co.
569	Belmont	Bt-1189	D-0914	Bannock Coal Co.
570	Belmont	Bt-771	D-0771	Marietta Coal Co.
575	Coshocton	Cn-831	D-0870	Oxford Mining Co.
577	Coshocton	Cn-RF	D-0689	R & F Coal Co.
578	Coshocton	Cn-RR	D-0872	R & R Minerals, Inc.
580	Harrison	Hn-710	D-0426	Harrison Mining Corp.
581	Harrison	Hn-748	D-0797	R & F Coal Co.
582	Harrison	Hn-750	D-0901	Valley Mining, Inc.
588	Muskingum	Mum-901	D-0898	Oxford Mining Co.
590	Perry	Py-388	IM-1092	Dennis Clay Co.
595	Tuscarawas	Ts-2014	D-0868	Valley Mining, Inc.
598	Tuscarawas	Ts-2019	D-0852	Kimble Clay & Limestone Co.
600	Tuscarawas	Ts-2022	D-0878	Kimble Clay & Limestone Co.
601	Tuscarawas	Ts-2023	D-0796	Holmes Limestone Co.
602	Vinton	Vn-191	D-0197, D-0867, D-0957, D-1004	Addington, Inc.
603	Belmont	Bt-1190	IM-1089	Frank Widmor Coal Co.
604	Belmont	Bt-AT	D-0922	Marietta Coal Co.
605	Belmont	Bt-C	D-0961	Cravat Coal Co.
607	Carroll	Cl-249	D-0933	Myers Mining
608	Columbiana	Ca-509	D-0052-2	Buckeye-Industrial Mining Co.
612	Columbiana	Ca-981	D-0941	Commercial Minerals, Inc.
614	Columbiana	Ca-984	D-0952	East Fairfield Coal Co.
616	Coshocton	Cn-OX	D-0964	Oxford Mining Co.
618	Guernsey	Gy-313	D-0907	R. T. G., Inc.
619	Harrison	Hn-228	D-0934	Cravat Coal Co.
622	Harrison	Hn-751	D-0956	Mesa Coal Corp.
623	Jackson	Jkn-1069	D-0944	Sands Hill Coal Co., Inc.
626	Noble	Ne-154	D-0900	B & N Coal, Inc.
627	Noble	Ne-155	D-0958	B & N Coal, Inc.
628	Noble	Ne-156	D-0932	B & N Coal, Inc.
629	Perry	Py-B	D-0940	Buckingham Mining & Reclamation, Inc.
631	Stark	Sk-246	IM-1114	American Landfill, Inc.
634	Tuscarawas	Ts-1939	IM-47	Belden Brick Co.
635	Tuscarawas	Ts-2027	D-0948	Miller Mining, Inc.
636	Tuscarawas	Ts-2040	D-0935	Toronto A & L Coal, Inc.
637	Tuscarawas	Ts-GC	D-0962, D-0967	Miller Mining, Inc.
638	Tuscarawas	Ts-2037	D-0921	Kimble Clay & Limestone Co.
640	Tuscarawas	Ts-RM	D-0904	Red Malcuit, Inc.
642	Tuscarawas	Ts-WS	D-0953	Miller Mining, Inc.
644	Carroll	Cl-HM	D-0992	Myers Mining
645	Carroll	Cl-W	D-0979	Regal Mining, Inc.
646	Columbiana	Ca-986	D-0975	C & E Coal, Inc.
647	Columbiana	Ca-991	D-0928	Buckeye-Industrial Mining Co.
648	Guernsey	Gy-315	D-0951	Northshore Coal, Inc.
649	Guernsey	Gy-C	D-0910	C L A Coal Co.

**NUMERICAL INDEX OF OPERATORS OF MINES**  
**SHOWN ON 1993 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY — Continued**

**COAL — Continued**

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
650	Harrison	Hn-753	D-0991	R & F Coal Co.
651	Jackson	Jkn-1066	D-0808	Sands Hill Coal Co., Inc.
652	Jackson	Jkn-1070	D-0997, et al.	Stewart Coal Co.
653	Jackson	Jkn-1071	D-1003	Sands Hill Coal Co., Inc.
654	Jefferson	Jfn-1286	D-0816, D-0818	Buckeye-Industrial Mining Co.
655	Jefferson	Jfn-815	D-0135	W. B. Coal Co., Inc.
656	Jefferson	Jfn-821	D-0937	Joyce Coal Co., Inc.
657	Jefferson	Jfn-823	D-0949	Sterling Mining Co.
658	Jefferson	Jfn-824	D-0564	R & F Coal Co.
659	Jefferson	Jfn-PE	IM-1162	Penn Eagle Coal Corp.
660	Mahoning	Mg-632	IM-808	Solomon's Mines, Inc.
663	Perry	Py-A	D-0931	Avis Coal Co.
664	Perry	Py-BM	D-0936, D-0977	Buckingham Mining & Reclamation, Inc.
665	Perry	Py-BMR	D-0980, D-1014, D-1050	Buckingham Mining & Reclamation, Inc.
666	Stark	Sk-249	D-0960	Buckingham Mining & Reclamation, Inc.
667	Tuscarawas	Ts-1517	IM-46	Belden Brick Co.
668	Tuscarawas	Ts-2024	IM-1087	Green Basin Coal, Inc.
669	Tuscarawas	Ts-2034	D-0516	Valley Mining, Inc.
670	Tuscarawas	Ts-2045	D-1001	Holmes Limestone Co.
671	Tuscarawas	Ts-DC	D-0954	Daron Coal Co., Inc.
673	Tuscarawas	Ts-2038	D-0965	Horizon Coal Corp.
674	Tuscarawas	Ts-HLC	D-0969	Holmes Limestone Co.
675	Vinton	Vn-194	D-0973	Elk Coal, Inc.
676	Wayne	We-R	IM-690	Rash Energy, Inc.
681	Belmont	Bt-1201	D-1020	Cravat Coal Co.
682	Belmont	Bt-1202	D-0483-5	Cravat Coal Co.
683	Belmont	Bt-B	D-0998	B. L. Black, Inc.
684	Belmont	Bt-M	D-1009	R & F Coal Co.
685	Carroll	Cl-819	D-0899	Valley Mining, Inc.
686	Carroll	Cl-HM1	D-1035	Myers Mining
687	Columbiana	Ca-BI	D-0994	Buckeye-Industrial Mining Co.
688	Columbiana	Ca-CM	D-0950, D-0999	Commercial Minerals
689	Columbiana	Ca-JG	D-1008	John Glenn Mining Co.
690	Coshocton	Cn-839	D-0879, D-0996	Sugarcreek Clay & Limestone, Inc.
691	Coshocton	Cn-P	D-1027	R & F Coal Co.
692	Coshocton	Cn-RF1	D-1012	R & F Coal Co.
693	Coshocton	Cn-RF2	D-0691	R & F Coal Co.
694	Coshocton	Cn-RR1	D-0974	R & R Minerals, Inc.
695	Coshocton	Cn-RR2	D-1033	R & R Minerals, Inc.
696	Guernsey	Gy-318	D-1025	Valley Mining, Inc.
697	Guernsey	Gy-319	D-0989	R.T.G., Inc.
698	Guernsey	Gy-RTG	D-0903	R.T.G., Inc.
699	Harrison	Hn-754	D-0829	R & F Coal Co.
700	Harrison	Hn-755	D-1000	Jack Martin
701	Harrison	Hn-756	D-1045	W. B. Coal Co., Inc.
703	Holmes	Hs-M	D-1021	Miller Mining, Inc.
704	Holmes	Hs-MMI	D-1044	Miller Mining, Inc.
705	Jackson	Jkn-1007	IM-24, D-0813	Cedar Heights Clay Co.
706	Jackson	Jkn-CH	IM-1060	Cedar Heights Clay Co.
707	Jackson	Jkn-SHC	D-0648	Sands Hill Coal Co., Inc.
708	Jefferson	Jfn-829	D-1006	D & L Contractors, Inc.
709	Jefferson	Jfn-831	D-1026	Valley Mining, Inc.
710	Jefferson	Jfn-832	D-1042	American Industries & Resources Corp.
711	Jefferson	Jfn-J	D-0995	R & F Coal Co.
712	Jefferson	Jfn-SD	D-0677	S. & D. Construction Corp.
714	Jefferson	Jfn-VM	D-1049	Valley Mining, Inc.
715	Muskingum	Mum-K	D-1017	King Quarries, Inc.
716	Muskingum	Mum-O	D-1030	Oxford Mining Co.
717	Perry	Py-JC	D-1048	J.C. Coal Co., Inc.
718	Stark	Sk-BI	D-1043	Buckeye-Industrial Mining Co.
719	Stark	Sk-HLC	D-1053	Holmes Limestone Co.
720	Tuscarawas	Ts-1841	IM-45	Belden Brick Co.
721	Tuscarawas	Ts-2035	D-1010	Miller Mining, Inc.



**NUMERICAL INDEX OF OPERATORS OF MINES  
SHOWN ON 1993 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY – Continued**

**COAL – Continued**

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
722	Tuscarawas	Ts-2042	D-0919, D-0993	Sugarcreek Clay & Limestone, Inc.
723	Tuscarawas	Ts-2043	D-1047	R & F Coal Co.
724	Tuscarawas	Ts-H1	IM-927	L & M Mineral Co.
725	Tuscarawas	Ts-M1	D-1023	Miller Mining, Inc.

**COAL-PREPARATION PLANTS ●**

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
1	Belmont	Bt-108		R & F Coal Co.
3	Belmont	Bt-936	D-0216	Marietta Coal Co.
4	Belmont	Bt-68	D-0360	Ohio Valley Coal Co.
5	Columbiana	Ca-879	D-0806	Buckeye-Industrial Mining Co.
6	Columbiana	Ca-892	D-0599	C & E Coal, Inc.
7	Coshocton	Cn-810		Conesville Coal Preparation Co.
8	Harrison	Hn-212	D-0192	Consolidation Coal Co.
9	Jackson	Jkn-1055	D-0347	Sands Hill Coal Co., Inc.
10	Jackson	Jkn-367	D-0285	Waterloo Coal Co., Inc.
12	Jefferson	Jfn-647	D-0492	Ohio Coal & Construction Corp.
13	Mahoning	Mg-623	D-0214	East Fairfield Coal Co.
14	Meigs	Ms-293	D-0354	Southern Ohio Coal Co.
15	Monroe	Me-4	D-0422	Quarto Mining Co. (subsidiary of Consolidation Coal Co.)
16	Morgan	Ne-41	D-0420	Central Ohio Coal Co.
18	Perry	Py-317	D-0248	Crooksville Coal Co., Inc.
19	Tuscarawas	Ts-115	D-0199	Empire Coal Co.
20	Tuscarawas	Ts-1938	D-0264	Central Fuel Co.
21	Tuscarawas	Ts-1942	D-0287	Horizon Coal Corp.
22	Vinton	Vn-145	D-0159	Benedict, Inc.
23	Vinton	Vn-178	D-0185	Addington, Inc.
24	Vinton	Vn-641	D-0169	Sands Hill Coal Co., Inc.
27	Wayne	Hs-79	D-0283	Holmes Limestone Co.
28	Muskingum	Mum-239	D-0428	Sands Mining Corp.
29	Columbiana	Ca-932	D-0532	Buckeye-Industrial Mining Co.
30	Harrison	Hn-169	D-0424	Harrison Processing Corp.
32	Tuscarawas	Ts-HC	D-0981	Horizon Coal Corp.
33	Columbiana	Ca-505	D-0223	State Line Resources, Inc.
34	Guernsey	Gy-320		Thompson Mining Co.

**LIMESTONE/DOLOMITE ■**

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
1	Adams	Ads-1	IM-237	Davon, Inc.
2	Adams	Ads-6	IM-659	Standard Lafarge
3	Allen	An-1	IM-485	Bluffton Stone Co.
5	Allen	An-3	IM-484	National Lime & Stone Co.
6	Allen	An-11	IM-541	National Lime & Stone Co.
7	Allen	An-4	IM-491	Suever Stone Co., Inc.
9	Athens	As-533	IM-17	R. A. Eberts Co., Inc.
10	Auglaize	Ae-31	IM-744	Con-Ag, Inc.
11	Auglaize	Ae-10	IM-486	National Lime & Stone Co.
12	Belmont	Bt-716	IM-1	Ayers Limestone Quarry, Inc.
15	Carroll	Cl-183	IM-7	Puskarich Limestone, Inc.
16	Clark	Ck-1	IM-373	American Aggregates Corp.
17	Clinton	Cln-1	IM-241	Melvin Stone Co.
18	Crawford	Cd-1	IM-404	National Lime & Stone Co.
19	Darke	Dke-1	IM-362	American Aggregates Corp.
20	Delaware	Del-4	IM-262	American Aggregates Corp.
21	Delaware	Del-5	IM-207	National Lime & Stone Co.

**NUMERICAL INDEX OF OPERATORS OF MINES  
SHOWN ON 1993 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY — Continued**

**LIMESTONE/DOLOMITE — Continued**

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
22	Delaware	Del-3	IM-327	American Aggregates Corp.
23	Delaware	Del-2	IM-299	Penry Stone Co.
24	Erie	Ee-27	IM-608	Erie Blacktop, Inc.
25	Erie	Ee-11	IM-263	Rogers Group, Inc. (dba Sandusky Crushed Stone Co.)
26	Erie	Ee-1	IM-310	Wagner Quarries Co.
27	Fayette	Fe-2	IM-169	American Aggregates Corp.
28	Fayette	Fe-1	IM-831	Melvin Stone Co.
29	Fayette	Fe-3	IM-329	American Aggregates Corp.
30	Franklin	Fn-2	IM-261	American Aggregates Corp.
31	Franklin	Fn-53	IM-185	American Aggregates Corp.
32	Greene	Ge-17	IM-435	American Aggregates Corp.
33	Clark, Greene	Ge-1	IM-393	Southwestern Portland Cement Co.
34	Greene	Ge-9	IM-364	Southwestern Portland Cement Co.
38	Hardin	Hdn-2	IM-443	Hardin Quarry Co., Inc.
41	Highland	Hd-2	IM-230	Davon, Inc.
42	Highland	Hd-3	IM-253	Ohio Asphaltic Limestone Corp.
43	Highland	Hd-4	IM-406	Marshall Quarry, Inc.
44	Holmes	Hs-67	IM-768	Holmes Limestone Co.
45	Holmes, Wayne	Hs-79	IM-656	Holmes Limestone Co.
47	Jackson	Jkn-367	IM-774	Waterloo Coal Co., Inc.
49	Logan	Lgn-1	IM-574	American Aggregates Corp.
50	Logan	Lgn-15	IM-453	C. E. Duff & Son, Inc.
51	Logan	Lgn-2	IM-494	Northwood Stone & Asphalt Co.
52	Lucas	Ls-1	IM-575	The France Stone Co.
53	Lucas	Ls-3	IM-580	The France Stone Co.
54	Lucas	Ls-2	IM-503	Stoneco, Inc.
56	Mahoning	Mg-54	IM-93	Honey Creek Stone Co.
57	Mahoning	Mg-608	IM-4	E.M.A.I. Corp.
59	Marion	Mn-2	IM-423	J. M. Hamilton & Sons Co., Inc.
60	Marion	Mn-3	IM-168	National Lime & Stone Co.
61	Marion	Mn-1	IM-250	Tri-County Limestone Co.
62	Mercer	Mr-1	IM-592	Stoneco, Inc.
63	Mercer	Mr-2	IM-430	Morrow Gravel Co.
64	Miami	Mi-1	IM-382	Piqua Materials, Inc.
66	Miami	Mi-502	IM-414	Barrett Paving Materials, Inc.
67	Miami	Mi-10	IM-335	C. F. Poeppelman, Inc.
70	Montgomery	My-1	IM-374	American Aggregates Corp.
71	Montgomery	My-23	IM-368	American Aggregates Corp.
72	Montgomery	My-58	IM-330	Southwestern Portland Cement Co.
75	Muskingum	Mum-106	IM-297	Chesterhill Stone Co.
76	Muskingum	Mum-24	IM-830	Midwest Portland Cement Corp.
78	Muskingum	Mum-104	IM-277	Sidwell Bros., Inc.
80	Monroe, Noble	Ne-86	IM-70	Zerger's Quarry
82	Ottawa	Oa-6	IM-296	White Rock Quarry, L.P., Division of U.S. Aggregates, Inc.
83	Ottawa	Oa-14	IM-320	Stoneco, Inc.
84	Ottawa	Oa-7	IM-440	Standard Lafarge
85	Ottawa	Oa-1	IM-292	GenLime Group, L.P.
86	Paulding	Pg-7		The France Stone Co.
87	Paulding	Pg-1	IM-513	Lafarge Corp.
88	Paulding	Pg-2	IM-481	Stoneco, Inc.
89	Perry	Py-235	IM-11, IM-515	Maxville Quarries, Inc.
91	Pike	Pke-13	IM-213	Latham Limestone, Inc.
92	Pickaway	Pky-4	IM-209	Melvin Stone Co.
95	Preble	Pre-5	IM-447	Wysong Stone Co.
98	Putnam	Pm-2	IM-570	Putnam Stone Co.
101	Sandusky	Sy-5	IM-259	Gotttron Bros. Co.
102	Sandusky	Sy-1	IM-537	Martin Marietta Magnesia Specialties, Inc.
103	Sandusky	Sy-4	IM-381	Redland Ohio, Inc.
104	Sandusky	Sy-3	IM-282	Redland Ohio, Inc.
106	Seneca	Sa-2	IM-352	Premier Services Corp.
107	Seneca	Sa-1	IM-347	The France Stone Co.
108	Seneca	Sa-3	IM-349	The France Stone Co.
109	Seneca	Sa-8	IM-313	North Shore Stone Quarries, Inc.

**NUMERICAL INDEX OF OPERATORS OF MINES  
SHOWN ON 1993 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY – Continued**

**LIMESTONE/DOLOMITE – Continued**

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
110	Shelby	Shy-6	IM-389	Miami River Stone Co.
111	Shelby	Shy-16	IM-411	Sidney Sand & Gravel Co.
112	Shelby	Shy-15	IM-387	Spring Creek Corp.
117	Tuscarawas	Ts-1818	IM-9	Kimble Clay & Limestone Co.
118	Tuscarawas	Ts-1928	IM-98	Sugarcreek Clay & Limestone, Inc.
119	Union	Un-1	IM-208	Northwood Stone & Asphalt Co.
120	Union	Un-2	IM-236	Union Aggregates Co.
121	Van Wert	Vt-3	IM-495	Stoneco, Inc.
122	Van Wert	Vt-7	IM-642	Ridge Township Quarry
123	Van Wert	Vt-1	IM-500	Suever Stone Co., Inc.
124	Vinton	Vn-174	D-0309	G & M Supply, Inc. (dba Clinton Stone, Inc.)
129	Wood	Wd-5	IM-473	The France Stone Co.
130	Wood	Wd-1	IM-548	MacRitchie Materials, Inc.
131	Wood	Wd-6	IM-480	Stoneco, Inc.
132	Wood	Wd-11	IM-475	Stoneco, Inc.
133	Wyandot	Wt-3	IM-298	McCarthy Stone Quarry
134	Wyandot	Wt-1	IM-405	National Lime & Stone Co.
135	Wyandot	Wt-8	IM-273	Wyandot Dolomite, Inc.
142	Greene	Ge-25	IM-437	American Aggregates Corp.
143	Montgomery	My-32	IM-1012	American Aggregates Corp.
144	Muskingum	Mum-269	IM-1009	Salt Creek Materials, Inc.
146	Coshocton	Cn-830	IM-1049	Sidwell Bros., Inc.
147	Guernsey, Muskingum	Gy-309	IM-1030	King Limestone, Inc.
148	Vinton	Vn-190	D-0761	Quality Stone Co.
149	Hancock	Hk-7	IM-1002	National Lime & Stone Co.
151	Belmont	Bt-1192	IM-1093	Black Gold Recovery, Inc.
152	Belmont	Bt-1190	IM-1089	Frank Widmor Coal Co.
153	Coshocton	Cn-A	IM-1011	Jim Romig Excavating
154	Franklin	Fn-43	IM-188	Olen Corp.
155	Greene	Ge-45	IM-364	American Aggregates Corp.
156	Hardin	Hdn-S	IM-1034	C. E. Duff & Son, Inc.
158	Jackson	Jkn-SH	IM-1068	Sands Hill Coal Co., Inc.
159	Lawrence	Le-B	IM-1188, D-0746	Belville Mining Co., Inc.
160	Lucas	Ls-12	IM-953	E.M.A.I. Corp.
161	Mahoning	Mg-629	IM-1008	Blum Mining Co.
162	Mahoning	Mg-EM	IM-1056	E.M.A.I. Corp.
163	Monroe	Me-C	IM-1088	Christman Quarry
164	Monroe	Me-509	IM-1094	Rubel Quarry, Inc.
165	Morgan	Mon-C	IM-1010	Central Ohio Coal Co.
166	Muskingum	Ne-C	D-0820	Central Ohio Coal Co.
167	Noble	Ne-S	IM-913	Sharon Stone Co.
168	Perry	Py-343	IM-1061	Maxville Quarries, Inc.
169	Tuscarawas	Ts-2024	IM-1087	Green Basin Coal, Inc.
170	Tuscarawas	Ts-1982	IM-621	L & M Mineral Co.
171	Mahoning	Mg-631	IM-1103	East Fairfield Coal Co.
173	Adams	Ads-H	IM-805	Holloway Sand & Gravel Co., Inc.
174	Erie	Ee-K	IM-727	Kellstone, Inc.
175	Highland	Hd-D	IM-1170	Dravo Basic Materials Co., Inc.
176	Jefferson, Harrison	Jfn-K	IM-1164	K.C.C.I.
177	Miami	Mi-BPM	IM-1169	Barrett Paving Materials, Inc.
178	Montgomery	My-Q	IM-860	Quarry Trails
179	Noble	Ne-B	IM-897	B & N Coal, Inc.
180	Ottawa	Oa-18	IM-635	Fox Stone Products, Inc.
181	Tuscarawas	Ts-B	IM-49	Belden Brick Co.
182	Vinton	Vn-193		Quality Stone Co.
183	Wood	Wd-14	IM-1157	Precision Aggregate, Inc.
184	Adams	Ads-BN	IM-1195	Davon, Inc.
185	Muskingum	Mum-907	IM-1200	Thompson Mining Co.
186	Muskingum	Mum-SB	IM-1212	Sidwell Bros., Inc.
187	Tuscarawas	Ts-1517	IM-46	Belden Brick Co.
188	Lucas	Ls-13	IM-492	Seaway Sand & Stone, Inc.



**NUMERICAL INDEX OF OPERATORS OF MINES**  
**SHOWN ON 1993 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY – Continued**

**SAND AND GRAVEL DREDGING OPERATION   △**

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
1		Ee-D		Erie Sand & Gravel Co.
2		Lke-D		Osborne Materials Co.

**SAND AND GRAVEL   ▲**

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
2	Allen	An-15	IM-721	Ward Materials, Inc.
6	Ashland	Ald-9	IM-0745	Ries Sand & Gravel
8	Ashland	Ald-7	IM-392	Young's Sand & Gravel Co.
9	Ashtabula	Asa-10	IM-198	Frye Sand & Gravel, Inc.
10	Ashtabula	Asa-14	IM-563	Janson's Soil Service, Inc.
11	Ashtabula	Asa-17	IM-886	Kinsman Sand & Gravel Co.
14	Ashtabula	Asa-12	IM-1130	Nelson Sand & Gravel, Inc.
15	Ashtabula	Asa-15	IM-783	R. W. Sidley, Inc.
19	Athens	As-588	IM-630	Black Top Contracting, Inc.
21	Athens	As-1161	IM-97	Lake Hope Asphalt, Inc.
23	Auglaize	Ae-23	IM-508	Joseph Sand & Gravel, Inc.
24	Auglaize	Ae-30	IM-598	National Lime & Stone Co.
25	Auglaize	Ae-16	IM-595	Quality Ready Mix, Inc.
26	Belmont	Bt-74	IM-288	Tri-State Asphalt Productions
28	Butler	Br-36	IM-649	V.I.P. Contractors, Inc.
29	Butler	Br-5	IM-153	American Aggregates Corp.
30	Butler	Br-35	IM-200	American Aggregates Corp.
31	Butler	Br-48	IM-562	Broshear Contractors, Inc.
32	Butler	Br-50	IM-739	Dingledine Basic Materials, Inc.
33	Butler	Br-14	IM-147	Dravo Basic Materials Co., Inc.
34	Butler	Br-29	IM-149	Dravo Basic Materials Co., Inc.
37	Butler	Br-40	IM-493	Indian Creek Sand & Gravel Co.
38	Butler	Br-52	IM-814	Shamrock Materials, Inc.
39	Butler	Br-15	IM-316	Mecco, Inc.
41	Butler	Br-6	IM-177	Weidle Sand & Gravel, Inc.
42	Butler	Br-3	IM-719	The Gravel Co.
44	Butler	Br-47	IM-111	Watson Gravel, Inc.
45	Butler	Br-38	IM-218	Welch Sand & Gravel, Inc.
47	Carroll	Cl-204	IM-554	Oneida Sand & Gravel, Inc.
48	Champaign	Cpn-1	IM-371	American Aggregates Corp.
49	Champaign	Cpn-21	IM-616	D & W Sand & Gravel
50	Champaign	Cpn-22	IM-889	Mechanicsburg Sand & Gravel, Inc.
51	Champaign	Cpn-20	IM-482	Moore's Excavating Co.
52	Clark	Ck-13	IM-366	American Aggregates Corp.
54	Clark	Ck-502	IM-375	Demmy Sand & Gravel
57	Clark	Ck-3	IM-463	Hilltop Basic Resources, Inc. (dba Enon Washed Sand & Gravel Co.)
58	Clark	Ck-25	IM-358	Springfield Sand & Gravel Co.
59	Clermont	Ct-9	IM-526	Barrett Paving Materials, Inc.
61	Clermont	Ct-7	IM-432	Kipp's Gravel Co., Inc.
68	Columbiana	Ca-881	IM-611	X L Sand & Gravel
69	Coshocton	Cn-718	IM-227	Apache Aggregate & Paving Co.
70	Coshocton	Cn-783	IM-717	Apache Aggregate & Paving Co.
71	Coshocton	Cn-694	IM-293	Boyd Gravel Co.
72	Coshocton	Cn-624	IM-243	Sugarcreek Clay & Limestone, Inc.
75	Crawford	Cd-3	IM-693	Gibson Sand & Gravel Co.
80	Darke	Dke-4	IM-433	Foureman's Sand & Gravel, Inc.
81	Darke	Dke-10	IM-326	Tom Hollinger Excavating
82	Defiance	De-2	IM-765	Hillsdale Sand & Gravel, Inc.
83	Erie	Ee-18	IM-676	Erie Materials, Inc.
84	Erie	Ee-29		Jarrett Sand Co.

**NUMERICAL INDEX OF OPERATORS OF MINES  
SHOWN ON 1993 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY – Continued**

**SAND AND GRAVEL – Continued**

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
85	Erie	Ee-5		Keener Sand & Clay Co.
86	Erie	Ee-24	IM-915	Mesenburg Bros., Inc.
92	Fairfield	Fd-13	IM-848	Lancaster Sand & Gravel Co.
94	Franklin	Fn-36	IM-302	Agg Rok Materials (Division of Wapak Sand & Gravel Co.)
95	Franklin	Fn-6	IM-185	American Aggregates Corp.
96	Franklin	Fn-23	IM-183	American Aggregates Corp.
97	Franklin	Fn-14	IM-832	Big Walnut Sand & Gravel Co.
98	Franklin	Fn-52	IM-191	J. P. Sand & Gravel Co.
99	Franklin	Fn-54	IM-847	L. & M. Excavators, Inc.
100	Franklin	Fn-11	IM-234	Mason's Sand & Gravel Co.
101	Franklin	Fn-24	IM-266	S & S Aggregate, Inc.
102	Franklin	Fn-43	IM-188	Olen Corp.
108	Geauga	Gea-29	IM-215	Haueter Sand & Gravel, Inc.
109	Geauga	Gea-35	IM-321	Teague Gravel Co., Inc.
110	Greene	Ge-33	IM-379	American Aggregates Corp.
112	Clark, Greene	Ge-4	IM-394	Hilltop Basic Resources, Inc.
115	Greene	Ge-36	IM-305	Phillips Sand & Gravel
117	Greene	Ge-10	IM-518	Xenia Sand, Gravel, & Asphalt Co.
118	Hamilton	Hmn-37	IM-170	American Aggregates Corp.
119	Hamilton	Hmn-AAC	IM-716	American Aggregates Corp.
120	Hamilton	Hmn-54	IM-710	Ashcraft Sand & Gravel, Inc.
121	Hamilton	Hmn-44	IM-120	Crosby Gravel
123	Hamilton	Hmn-50	IM-205	James Bunnell, Inc.
124	Hamilton	Hmn-59	IM-815	James Bunnell, Inc.
126	Hamilton	Hmn-3	IM-137	Dravo Basic Materials Co., Inc.
127	Hamilton	Hmn-5	IM-148	Dravo Basic Materials Co., Inc.
128	Hamilton	Hmn-11, Hmn-70	IM-133	Dravo Basic Materials Co., Inc.
130	Hamilton	Hmn-64	IM-821	Dravo Basic Materials Co., Inc.
131	Hamilton	Hmn-68	IM-747	Dravo Basic Materials Co., Inc.
132	Hamilton	Hmn-46	IM-396	Eaton Sand & Gravel Co.
134	Hamilton	Hmn-71	IM-771	Southern Ohio Sand & Gravel, Inc.
135	Hamilton	Hmn-17	IM-295	Harrison Sand & Gravel Co.
137	Hamilton	Hmn-67	IM-529	Bertha A. Leonard
139	Hamilton	Hmn-10	IM-226	Rack Sand, Inc.
141	Hamilton	Hmn-28	IM-353	The Gravel Co.
142	Hamilton	Hmn-60	IM-761	Watson Gravel, Inc.
143	Hamilton	Hmn-42	IM-823	Welch Sand & Gravel, Inc.
144	Hamilton	Hmn-48	IM-220	Welch Sand & Gravel, Inc.
147	Henry	Hy-5		Gerken Materials, Inc.
151	Hocking	Hg-262	IM-41	Hocking Valley Concrete, Inc.
152	Hocking	Hg-301	IM-458	Muskingum River Gravel Co.
153	Holmes	Hs-82	IM-707	Menuet Bros. Sand & Gravel, Inc.
154	Holmes	Hs-511	IM-1048	Feikert Sand & Gravel, Inc.
157	Huron	Hrn-1	IM-550	Rogers Group, Inc. (dba Norwalk Sand & Gravel)
159	Knox	Kx-13	IM-343	S & S Aggregate, Inc.
160	Knox	Kx-7	IM-235	Goodwin Sand & Gravel, Inc.
161	Knox	Kx-16	IM-793	Olen Corp.
162	Knox	Kx-5	IM-884	Mickley Gravel Co.
163	Knox	Kx-3	IM-300	Sant Sand & Gravel, Inc.
165	Knox	Kx-15	IM-967	Small's Sand & Gravel, Inc.
166	Lake	Lke-7	IM-162	R. W. Sidley, Inc.
167	Lawrence	Le-430	IM-844	Becky Lane Trucking, Inc.
170	Lawrence	Le-426	IM-856	Burlington Sand & Gravel Co.
174	Licking	Lg-2	IM-184	American Aggregates Corp.
176	Licking	Lg-31	IM-246	Dry Creek Gravel Co.
177	Licking	Lg-DC	IM-354	Dry Creek Gravel Co.
179	Licking	Lg-10	IM-217	Van Wey Sand & Gravel, Inc.
180	Licking	Lg-15		Walter's Gravel
181	Licking	Lg-38	IM-695	York Road Gravel Co.
182	Logan	Lgn-31	IM-454	C. E. Duff & Son, Inc.
183	Logan	Lgn-39	IM-887	C. E. Duff & Son, Inc.
189	Logan	Lgn-6	IM-459	Neer's Sand & Gravel
191	Lorain	Ln-12	IM-731	Guy Schieve

**NUMERICAL INDEX OF OPERATORS OF MINES  
SHOWN ON 1993 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY — Continued**

**SAND AND GRAVEL — Continued**

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
195	Lucas	Ls-13	IM-492	Seaway Sand & Stone, Inc.
196	Mahoning	Mg-632	IM-808	Solomon's Mines, Inc.
197	Marion	Mn-16	IM-171	Scioto Sand & Gravel
198	Marion	Mn-4	IM-290	Penry Stone Co.
200	Marion	Mn-10	IM-196	Union Aggregates Co.
203	Medina	Ma-20	IM-448	Baker Sand, Inc.
206	Medina	Ma-22	IM-425, IM-650, IM-651	Seville Sand & Gravel, Inc.
208	Medina	Ma-16		Silchuk Gravel Co.
209	Meigs	Ms-205	IM-30	Dravo Basic Materials Co., Inc.
211	Meigs	Ms-301	IM-619	Meigs County Commissioners
212	Meigs	Ms-298	IM-32	Richards & Son, Inc.
216	Miami	Mi-6	IM-356	American Aggregates Corp.
217	Miami	Mi-501		New Carlisle Sand & Gravel Co.
219	Miami	Mi-3	IM-462, IM-658	American Aggregates Corp.
220	Miami	Mi-8	IM-355	American Aggregates Corp.
221	Miami	Mi-9	IM-408	Wise Gravel
222	Miami	Mi-4	IM-472	Fenner Sand & Gravel, Inc.
224	Montgomery	My-66	IM-677	American Aggregates Corp.
225	Montgomery	My-65	IM-594	Broadway Sand & Gravel, Inc.
229	Montgomery	My-68	IM-646	H & H Utilities Co.
232	Montgomery	My-19	IM-401, IM-916	Hilltop Basic Resources, Inc.
233	Montgomery	My-52	IM-348	Miller Bros. Gravel, Inc.
235	Montgomery	My-49	IM-370	Northmont Sand & Gravel Co.
236	Montgomery	My-55	IM-571	Jimsco, Inc.
238	Montgomery	My-61	IM-468	Tipp Stone Co., Inc.
239	Montgomery	My-41	IM-360	Weidle Sand & Gravel, Inc.
240	Morgan	Mon-588	IM-35	Chesterhill Stone Co.
241	Morgan	Mon-599		Huck Farms
242	Morrow	Mw-10	IM-258	Chesterville Sand & Gravel Co., Inc.
243	Muskingum	Mum-863	IM-264	Boyd Gravel Co.
244	Muskingum	Mum-799	IM-317	Boyd Gravel Co.
247	Muskingum	Mum-228	IM-421	Muskingum River Gravel Co.
248	Muskingum	Mum-216	IM-689	Salt Creek Materials, Inc.
251	Pickaway	Pky-1	IM-409, IM-428	American Aggregates Corp.
252	Pike	Pke-26	IM-142	Valley Materials Co.
253	Pike	Pke-23	IM-242	Chattin Concrete
254	Pike	Pke-30	IM-786	Gregory Materials Co.
255	Pike	Pke-24	IM-222	Standard Lafarge
256	Portage	Pe-50	IM-96	Beck Sand & Gravel, Inc.
257	Portage	Pe-15	IM-104	Karl Brugmann Sand & Gravel, Inc.
258	Portage	Pe-9	IM-119	Oscar Brugmann Sand & Gravel, Inc.
259	Portage	Pe-17	IM-123	Charlestown Sand & Gravel, Inc.
260	Portage	Pe-84	IM-868	Aurora Sand & Gravel, Inc.
261	Portage	Pe-45	IM-139	R. A. Cruise Sand & Gravel, Inc.
262	Portage	Pe-56	IM-127	Hilltop Aggregate, Inc.
264	Portage	Pe-10	IM-138	Hugo Sand Co.
265	Portage	Pe-63	IM-82	Jefferson Materials Co.
266	Portage	Pe-83	IM-179	Karg Sand & Gravel Co.
268	Portage	Pe-40	IM-190	Lakeside Sand & Gravel Co.
272	Portage	Pe-39	IM-174	Miller Sand & Gravel Co.
273	Portage	Pe-85	IM-700	Northern Ohio Materials, Inc.
274	Portage	Pe-60	IM-78	Schloss Materials Co.
275	Portage	Pe-18	IM-193	Sober Sand & Gravel Co.
276	Portage	Pe-36	IM-90	Solon Excavators Sand & Gravel, Inc.
277	Portage	Pe-68	IM-687, IM-1107	Standard Lafarge
278	Portage	Pe-SS1	IM-660	Standard Lafarge
280	Portage	Pe-64	IM-1017	Rainbow Sand & Gravel, Inc.
281	Portage	Pe-59	IM-210	S & S Aggregate, Inc.
282	Portage	Pe-67	IM-202	S & S Aggregate, Inc.
284	Preble	Pre-7	IM-306	Southern Ohio Aggregates
285	Preble	Pre-4	IM-477	Wysong Gravel Co.
286	Preble	Pre-6	IM-478	Wysong Gravel Co.
287	Richland	Rd-4	IM-279	D. H. Bowman & Sons, Inc.



**NUMERICAL INDEX OF OPERATORS OF MINES**  
**SHOWN ON 1993 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY — Continued**

**SAND AND GRAVEL — Continued**

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
289	Richland	Rd-18	IM-670	Ganges Gravel
290	Richland	Rd-14	IM-436	John L. Garber Materials, Inc.
297	Ross	Rs-26	IM-922	Elm Spring Farm
303	Scioto	So-98	IM-474	E. E. Blair Construction Co.
304	Scioto	So-83	IM-211	Cunningham Asphalt Paving, Inc.
305	Scioto	So-78		Schilling Contractors, Inc.
306	Scioto	So-79	IM-221	Standard Lafarge
310	Shelby	Shy-12	IM-528	Fleckenstein Farm Gravel Pit
311	Shelby	Shy-17	IM-389	Miami River Stone Co.
312	Shelby	Shy-13	IM-412	Sidney Sand & Gravel Co.
314	Shelby	Shy-11	IM-743	Spring Creek Corp.
315	Shelby	Shy-18	IM-388	Spring Creek Corp.
316	Stark	Sk-N	IM-156	Northern Ohio Paving Co.
318	Stark	Sk-681	IM-164	Canton Aggregate
319	Stark	Sk-689	IM-173	Canton Aggregate
320	Stark	Sk-694	IM-858	A. J. Diana Sons, Inc.
323	Stark	Sk-688	IM-763	Heiser Sand & Gravel
325	Stark	Sk-607	IM-102	Massillon Washed Gravel Co.
326	Stark	Sk-165	IM-192, IM-781	Oster Sand & Gravel, Inc.
327	Summit	St-52	IM-900	Fletcher Sand & Gravel, Inc.
328	Summit	St-39	IM-983	Lerkis Asphalt Co., Inc.
330	Summit	St-46	IM-557	H. M. Miller Construction Co.
333	Summit	St-24	IM-239	Riverside Sand & Gravel Co., Inc.
334	Summit	St-9	IM-167	Rubber City Sand & Gravel Co.
335	Summit	St-26	IM-803	Spring Valley Investments, Inc.
336	Summit	St-44	IM-178	S & S Aggregate, Inc.
340	Ashtabula, Trumbull	TL-12	IM-131	Samco, Inc.
342	Tuscarawas	Ts-1852	IM-75	Oster Sand & Gravel, Inc.
343	Tuscarawas	Ts-1826	IM-88	Soehnen Bros. Sand & Gravel, Inc.
344	Tuscarawas	Ts-1771	IM-77	Spring Industries, Inc.
346	Tuscarawas	Ts-111	IM-55	Stewart & Reichman, Inc.
347	Tuscarawas	Ts-69	IM-51	Stocker Sand & Gravel Co.
348	Tuscarawas	Ts-125	IM-50	Stocker Sand & Gravel Co.
349	Warren	Wan-38	IM-615	American Aggregates Corp.
352	Warren	Wan-41	IM-629	Dravo Basic Materials Co., Inc., Carl E. Oeder & Sons Sand & Gravel
356	Warren	Wan-47	IM-846	C & S Contractors, Inc.
363	Warren	Wan-10	IM-465	Watson Gravel, Inc.
364	Washington	Wn-55	IM-669	Beverly Slag Co.
365	Washington	Wn-508	IM-57	Briggs Sand & Gravel, Inc.
367	Washington	Wn-38	IM-701	Muskingum River Gravel Co.
369	Washington	Wn-510	IM-25	Trout Sand & Gravel Co.
372	Wayne	We-11	IM-547	Prairie Lane Sand & Gravel Co.
373	Wayne	We-7	IM-471	Rupp Construction, Inc.
374	Wayne	We-15	IM-398	Zollinger Sand & Gravel Co.
375	Williams	Ws-6	IM-497	Stoneco, Inc.
376	Williams	Ws-9	IM-498	Stoneco, Inc.
377	Defiance, Williams	Ws-11	IM-509, IM-661	Weber Sand & Gravel, Inc.
378	Williams	Ws-14	IM-614	Dennis Winzeler
379	Wyandot	Wt-4	IM-520	Precision Aggregate, Inc.
380	Wyandot	Wt-5, Wt-15	IM-376	National Lime & Stone Co.
381	Wyandot	Wt-18	IM-551	National Lime & Stone Co.
382	Wyandot	Wt-17	IM-604	Kirby's Sand & Gravel, Inc.
384	Summit	St-53	IM-874	Portage Lakes Sand & Gravel Co.
385	Clark	Ck-501	IM-340	Demmy Construction, Inc.
386	Stark	Sk-203	IM-654	American Sand & Gravel
387	Portage	Pe-ASG	IM-212	American Sand & Gravel
388	Lawrence	Le-445	IM-928	D & D Sand Bank
389	Tuscarawas	Ts-1976	IM-941, IM-942	Benco Leasing, Inc.
390	Miami	Mi-T	IM-696	Lloyd Fry
395	Scioto	So-100	IM-950	Scioto Valley Resources
396	Muskingum	Mum-261	IM-957	Lazy Acre Farms, Inc.
401	Fairfield	Fd-14	IM-933	Paul D. Beery Trucking Co.

**NUMERICAL INDEX OF OPERATORS OF MINES  
SHOWN ON 1993 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY — Continued**

**SAND AND GRAVEL — Continued**

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
403	Greene	Ge-40	IM-923	Donald Martin Contracting
404	Greene	Ge-42	IM-954	American Aggregates Corp.
405	Greene	Ge-32	IM-400	American Aggregates Corp.
407	Hamilton	Hmn-69	IM-969	American Aggregates Corp.
408	Knox	Kx-17	IM-968	Small's Sand & Gravel, Inc.
409	Richland	Rd-20	IM-617	Bolin & Bartley, Inc.
410	Muskingum	Mum-267	IM-914	Luburgh, Inc.
412	Ashland	Ald-15	IM-944	Young's Sand & Gravel Co.
413	Ashtabula	Asa-18	IM-949	Simak Trucking, Inc.
415	Geauga	Gea-9	IM-132	Soltis Sand & Gravel
416	Holmes	Hs-96	IM-997	Jeff Chaney
417	Huron	Hrn-16	IM-975	Erie Blacktop, Inc.
419	Licking	Lg-504	IM-991	Gary Roberts Excavating
420	Logan	Lgn-36	IM-1007	C. E. Duff & Son, Inc.
423	Marion	Mn-F	IM-990	Fleming Construction Co., Inc.
424	Monroe	Me-508	IM-1000	B & D Paving Co.
427	Summit	St-54	IM-934	R & S, Inc.
428	Tuscarawas	Ts-2001	IM-1004	Newton Asphalt
429	Warren	Wan-46	IM-679, IM-842	Paul N. Herdman
430	Warren	Wan-50	IM-1006	L & I Natural Resources, Inc.
432	Washington	Wn-54	IM-383	Atlas Towing Co.
435	Stark	Sk-173	IM-879	Allied Corp., Inc.
437	Clark	Ck-7	IM-449	City of Springfield
438	Coshocton	Cn-828	IM-1026	William Albert, Inc.
440	Gallia	Ga-626	IM-1046	Cremeans Concrete & Supply
441	Greene	Ge-38	IM-333	Watson Gravel, Inc.
442	Geauga	Gea-39	IM-1104	B-M Machine Co.
443	Geauga	Gea-40	IM-977	Solon Excavators Sand & Gravel, Inc.
444	Logan	Lgn-12	IM-1193	C. E. Duff & Son, Inc.
446	Miami	Mi-12	IM-467	Tipp Stone Co., Inc.
447	Miami	Mi-504	IM-1032	Stillwater Sand & Gravel, Inc.
448	Muskingum	Mum-262	IM-422	Muskingum River Gravel Co.
449	Muskingum	Mum-899		Boyd Gravel Co.
451	Portage	Pe-89	IM-1142	Green Oaks Potting Products
452	Ross	Rs-M	IM-114	Muskingum River Gravel Co.
453	Stark	Sk-241	IM-582	Standard Lafarge
455	Stark	Sk-243	IM-908	American Sand & Gravel
456	Wood	Wd-13	IM-998	G. M. Sader Excavating & Paving, Inc.
457	Ashtabula	Asa-13		Fred J. Dreslinski
458	Athens	As-595	IM-1083	Cochran Transportation Services, Inc.
459	Athens	As-W	IM-979	Weber Aggregates
460	Butler	Br-S	IM-1053	Southern Ohio Aggregates, Inc.
461	Clark	Ck-28	IM-1100	Barrett Paving Materials, Inc.
463	Columbiana	Ca-982	IM-1108	Leetonia Sand & Gravel Co., Inc.
464	Columbiana	Ca-U	IM-999	United Builders Distributing Corp.
465	Franklin	Fn-58	IM-1023	Olen Corp.
466	Gallia	Ga-O	IM-1028	Ours Sand & Gravel
467	Hamilton	Hmn-AS	IM-1106	Allgeier & Son, Inc.
468	Hamilton	Hmn-D	IM-1079	Dravo Basic Materials Co., Inc.
469	Hardin	Hdn-C	IM-1081	Crates Excavating
470	Holmes	Hs-J	IM-1043	Jones Sand & Gravel Co.
472	Lucas	Ls-G	IM-1090	H. T. Griffin Excavating, Inc.
473	Lucas	Ls-SS	IM-1069	Seaway Sand & Stone, Inc.
474	Madison	Mdn-11	IM-1063	Tuffco Sand & Gravel, Inc.
475	Mahoning	Mg-630	IM-1091	Wallace Rd. Sand & Gravel
476	Mahoning	Mg-629	IM-1008	Blum Mining Co.
478	Morgan	Mon-CS	IM-1105	Chesterhill Stone Co.
480	Pickaway	Pky-H	IM-1039	William A. Hoffman, Jr.
481	Pickaway	Pky-R	IM-993	Richards Farms, Inc.
482	Portage	Pe-61	IM-1064	Red Brush Peat Co.
483	Portage	Pe-92	IM-522	Don Wartko Construction, Inc.
486	Portage	Pe-SE	IM-1096	Solon Excavators Sand & Gravel, Inc.
487	Portage	Pe-SS2	IM-1047	Standard Lafarge

**NUMERICAL INDEX OF OPERATORS OF MINES  
SHOWN ON 1993 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY — Continued**

**SAND AND GRAVEL — Continued**

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
488	Preble	Pre-9	IM-1095	Loxley Aggregates, Inc.
489	Richland	Rd-L	IM-1086	Carroll Lifer Excavating, Inc.
490	Ross	Rs-27	IM-1098	Chillicothe Sand & Gravel Co.
491	Ross	Rs-H	IM-1052	Haubeil & Sons Asphalt & Materials, Inc.
493	Shelby	Shy-S	IM-1005	Sidney Sand & Gravel Co.
494	Shelby	Shy-SC	IM-1018	Spring Creek Gravel Co., Inc.
495	Stark	Sk-M	IM-1031	Massillon Materials, Inc.
498	Summit	St-L	IM-1027	Lerkis Asphalt Co., Inc. & Subsidiary
499	Trumbull	TL-K	IM-1101	Kleese Development Associates, Inc.
500	Tuscarawas	Ts-2018	IM-1076	Zink Petroleum Corp. (dba State Rte. 416 Sand & Gravel)
501	Warren	Wan-M	IM-728, IM-1065	Morrow Gravel Co.
502	Warren	Wan-M1	IM-1051	Morrow Gravel Co.
503	Warren	Wan-M2	IM-837	Morrow Gravel Co.
504	Washington	Wn-1007	IM-1042	Mark Williams Blacktop Co., Inc.
506	Williams	Ws-T	IM-1022	Stoneco, Inc.
507	Gallia	Ga-507	IM-1074	Cedar Heights Clay Co.
508	Ashland	Ald-G	IM-1121	David B. Good
509	Ashland	Ald-16	IM-1120	Bolin & Bartley, Inc.
510	Ashtabula	Asa-N	IM-1109	Nelson Sand & Gravel, Inc.
512	Carroll	Cl-N	IM-641	National Aggregates, Inc.
513	Champaign	Cpn-J	IM-1133	J & A Excavating
516	Delaware	Del-S	IM-1118	Michael B. Sayers
517	Geauga	Gea-N	IM-1123	Newbury Sand & Gravel
518	Geauga	Gea-TK	IM-902	T & K Kuhnle Co.
519	Hamilton	Hmn-B	IM-1139	James Bunnell, Inc.
520	Hamilton	Hmn-C	IM-1132	Nelson Transfer, Inc.
521	Hamilton	Hmn-AS1	IM-797	Allgeier & Son, Inc.
523	Hocking	Hg-329	IM-1112	Kilbarger Construction, Inc.
526	Logan	Lgn-M	IM-799	Miller Bros. Construction, Inc.
528	Portage	Pe-SSC	IM-318	Sunshine Sand Co.
529	Portage	Pe-96	IM-792	Don's Dozer Service
530	Ross	Rs-R	IM-1143	Ross County Gravel Co.
531	Tuscarawas	Ts-L	IM-1125	Larkin Sewer Contractors, Inc.
532	Tuscarawas	Ts-2029	IM-1129	Burrgett Industries, Inc.
533	Washington	Wn-1008	IM-1111	Grimes Excavating
534	Washington	Wn-1009	IM-525	Mark Williams Blacktop Co., Inc.
535	Wayne	We-23	IM-1136	Buckeye Excavating
536	Champaign	Cpn-24	IM-1167	Bill McKeever Excavating
537	Clermont	Ct-11	IM-665	John E. Jones Construction Co.
538	Columbiana	Ca-993	IM-1180	Willowbrook
539	Columbiana	Ca-H	IM-634	Hutson Road Mining Co.
540	Coshocton	Cn-A	IM-971	Addy Sand & Gravel Co.
541	Fairfield	Fd-16	IM-1156	James E. Downard
542	Fulton	Ftn-S	IM-1146	Sandman Sand & Stone, Inc.
543	Fulton	Ftn-6	IM-1175	Tommie G. Walters
544	Gallia	Ga-J	IM-1145	Jaymar, Inc.
545	Geauga	Gea-H	IM-510	Haueter Sand & Gravel, Inc.
546	Greene	Ge-46	IM-1149	Don Thompson Excavating, Inc.
547	Greene	Ge-R	IM-829	Richards Service Garage
548	Greene	Ge-47	IM-751	M. J. Coates Construction Co.
549	Greene	Ge-W	IM-645	Hoyle Weddle
550	Greene	Ge-G	IM-655	James D. Graham
551	Hamilton	Hmn-S	IM-746	Southern Ohio Aggregates, Inc.
552	Hamilton	Hmn-SO	IM-720	Southern Ohio Aggregates, Inc.
553	Hardin	Hdn-H	IM-864	Norman Harpster
554	Jefferson	Jfn-PE	IM-1162	Penn Eagle Coal Corp.
555	Knox	Kx-OC	IM-930	Olen Corp.
556	Lucas	Ls-MH	IM-1144	Sandman Sand & Stone, Inc.
557	Lucas	Ls-F	IM-1160	Craig Fankhauser
558	Medina	Ma-23	IM-1177	Friendsville Sand, L.P.
559	Meigs	Ms-L	IM-1159	Letart Corp.
560	Meigs	Ms-308	IM-1174	Letart Corp.
561	Montgomery	My-CW	IM-878	Carter & Carter, Inc.



**NUMERICAL INDEX OF OPERATORS OF MINES  
SHOWN ON 1993 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY — Continued**

**SAND AND GRAVEL — Continued**

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
562	Montgomery	My-R	IM-539	John P. Raisch, Inc.
563	Morgan	Mon-CSC	IM-1178	Chesterhill Stone Co.
564	Pickaway	Pky-D	IM-1150	Darby Gravel Co.
565	Pickaway	Pky-W	IM-1176	Eugene T. Wilson
567	Portage	Pe-K	IM-1148	R. G. Karg Development Co.
568	Portage	Pe-E	IM-1154	Daniel Ebie Trucking
569	Portage	Pe-SP	IM-499	Schloss Materials Co.
570	Portage	Pe-L	IM-154	Lucky Sand & Gravel Co.
571	Preble	Pre-AAC	IM-779	American Aggregates Corp.
573	Ross	Rs-E	IM-1168	David E. Edington
574	Ross	Rs-RC	IM-925	Ross County Redi-Mix Co., Inc.
575	Ross	Rs-P	IM-122	P. & D. & Sons, Inc.
576	Scioto	So-B	IM-705	Boone Coleman
577	Shelby	Shy-SS	IM-438	Sidney Sand & Gravel Co.
578	Stark	Sk-MW	IM-1171	Massillon Washed Gravel Co.
579	Stark	Sk-W	IM-867	Ralph C. Wagner & Sons
580	Stark	Sk-MM	IM-752	Massillon Materials, Inc.
581	Stark	Sk-R	IM-697	Rupp Construction, Inc.
582	Stark	Sk-SI	IM-588	Spring Industries, Inc.
583	Summit	St-S	IM-722	Sam Serves
584	Trumbull	Tl-N	IM-1158	Nick's Trucking
586	Tuscarawas	Ts-2036	IM-1155	Oster Sand & Gravel, Inc.
587	Tuscarawas	Ts-G	IM-1151	Al Gasser Excavating, Inc.
588	Tuscarawas	Ts-SI	IM-569	Spring Industries, Inc.
589	Warren	Wan-7	IM-151	Embro, Inc.
590	Washington	Wn-M	IM-1163	M & J Sand & Gravel, Inc.
591	Wyandot	Wt-K	IM-943	Kirby Sand & Gravel, Inc.
592	Ashtabula	Asa-E	IM-1214	Easton Resources, Inc.
593	Ashtabula	Asa-K	IM-1198	Kinsman Sand & Gravel Co.
594	Coshocton	Cn-SQ	IM-1185	Stonehill Quarry, Inc.
595	Cuyahoga	Cya-42	IM-686	Boyas Excavating, Inc.
596	Hocking	Hg-G	IM-1201	Good Builders
597	Lake	Lke-C	IM-1215	Andrew Cashen
598	Lake	Lke-D	IM-1187	DeMilta Sand & Gravel, Inc.
599	Lawrence	Le-E	IM-1197	Bill Enyart & Son Contracting, Inc.
600	Licking	Lg-W	IM-1213	Walker Trucking & Excavating Co.
601	Lucas	Ls-H	IM-1217	Hidden Harbour Partners
602	Mahoning	Mg-631	IM-1103	East Fairfield Coal Co.
603	Pickaway	Pky-AAC	IM-1204	American Aggregates Corp.
604	Pickaway	Pky-R1	IM-992	Richards Farms, Inc.
605	Portage	Pe-BSG	IM-1184	Brimfield Sand & Gravel
606	Ross	Rs-T	IM-1189	Tackett Builders
607	Stark	Sk-BE	IM-1202	Beaver Excavating, Inc.
608	Stark	Sk-HS	IM-1193	Heiser Sand & Gravel Co.
609	Stark	Sk-HS1	IM-1203	Heiser Sand & Gravel Co.
610	Stark	Sk-NA	IM-1186	National Aggregates, Inc.
611	Trumbull	Tl-C	IM-1190	Center West Enterprise, Inc.
612	Tuscarawas	Ts-A	IM-1218	Acme Sand & Gravel
613	Wayne	We-24	IM-1211	E. A. Construction, Inc.
614	Williams	Ws-20		Gerken Materials, Inc.
615	Portage	Pe-98	IM-1219	Johnson Rd. Sand & Gravel

**SANDSTONE/CONGLOMERATE ▼**

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
1	Carroll	Cl-102	IM-278	Conotton Valley Quarries Co.
4	Coshocton	Cn-13	IM-397	Briar Hill Stone Co.
5	Coshocton	Cn-659	IM-232	Briar Hill Stone Co.
6	Coshocton	Cn-686	IM-504	Briar Hill Stone Co.
7	Coshocton	Cn-692	IM-294	Briar Hill Stone Co.

**NUMERICAL INDEX OF OPERATORS OF MINES  
SHOWN ON 1993 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY — Continued**

**SANDSTONE/CONGLOMERATE — Continued**

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
8	Coshocton	Cn-695	IM-402	Briar Hill Stone Co.
13	Cuyahoga	Cya-42	IM-686	Boyas Excavating, Inc.
14	Erie	Ee-21	IM-416	Cleveland Quarries, L.P.
17	Geauga	Gea-3	IM-89	Best Sand Corp.
18	Geauga	Gea-1	IM-163	R. W. Sidley, Inc.
19	Holmes	Hs-49	IM-418	Briar Hill Stone Co.
20	Huron	Hrn-8	IM-268	Mesenburg Bros., Inc.
23	Knox	Kx-12	IM-445	Briar Hill Stone Co.
24	Knox	Kx-1	IM-269	Central Silica Co.
27	Lorain	Ln-3	IM-415	Cleveland Quarries, L.P.
30	Mahoning	Mg-62	IM-599	Gwin Contracting Co.
34	Ross	Rs-16	IM-172	Southern Silica, Inc.
36	Scioto	So-48	IM-140	Waller Bros. Stone Co.
37	Scioto	So-76	IM-141	Waller Bros. Stone Co.
38	Scioto	So-82	IM-158	Waller Bros. Stone Co.
40	Trumbull	Tl-13	IM-777	Sidwell Bros., Inc.
41	Tuscarawas	Ts-1818	IM-9	Kimble Clay & Limestone Co.
42	Tuscarawas	Ts-1660	IM-68	U.S. Silica Co.
43	Washington	Wn-45	IM-125	Alan Stone Co., Inc.
44	Coshocton	Cn-815	IM-939	Briar Hill Stone Co.
45	Pike	Pke-31	IM-835	Schrader Sand & Gravel
46	Coshocton	Cn-809	IM-909	Briar Hill Stone Co.
47	Columbiana	Ca-970	IM-1024	M & M Builders Supply Co.
48	Perry	Py-344	IM-1014	Central Silica Co.
49	Summit	St-24	IM-239	Riverside Sand & Gravel Co., Inc.
50	Geauga	Gea-N	IM-1123	Newbury Sand & Gravel
51	Belmont	Bt-1193	IM-1117	Alan Stone Co., Inc.
53	Mahoning	Mg-631	IM-1103	East Fairfield Coal Co.
54	Tuscarawas	Ts-2032	IM-1141	Slankard Dozer Service, Inc.
55	Tuscarawas	Ts-1982	IM-621	L & M Mineral Co.
56	Belmont	Bt-1190	IM-1089	Frank Widmor Coal Co.
57	Columbiana	Ca-888	IM-1181	D. & D. Mining Co.
58	Geauga	Gea-S	IM-161	R. W. Sidley, Inc.
59	Jefferson	Jfn-PE	IM-1162	Penn Eagle Coal Corp.
60	Lake	Lke-K	IM-859	Keeney Sand & Stone, Inc.
61	Perry	Py-K	IM-851	Kieco Sand & Shale
62	Tuscarawas	Ts-1517	IM-46	Belden Brick Co.
63	Tuscarawas	Ts-2024	IM-1087	Green Basin Coal, Inc.
64	Wayne	We-R	IM-690	Rash Energy, Inc.
65	Columbiana	Ca-982	IM-1108	Leetonia Sand & Gravel Co., Inc.
66	Lorain	Ln-G	IM-1205	Golden Crescent Construction, Inc.
67	Perry	Py-DCC	IM-1192	Dennis Clay Co.
68	Summit	St-60	IM-1206	Ohio Bulk Transfer Co.
69	Wayne	We-26	IM-1210	Rash Energy, Inc.

**CLAY/SHALE □**

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
1	Ashland	Ald-1	IM-334	London Tile Co.
2	Auglaize	Ae-7		Sandkuhl Tile Co., Inc.
4	Columbiana	Ca-505	IM-13, IM-936	State Line Resources, Inc.
5	Columbiana	Ca-205	IM-74	Summitville Tiles, Inc.
6	Coshocton	Cn-787	IM-610	General Clay Products Corp.
7	Cuyahoga	Cya-19	IM-95	Hydraulic Press Brick Co.
10	Greene	Ge-8	IM-364	Southwestern Portland Cement Co.
11	Harrison	Hn-152	IM-42	Bowerston Shale Co.
12	Hocking	Hg-205	IM-21	General Clay Products Corp.
17	Holmes	Hs-56		Clark Clay Co.

**NUMERICAL INDEX OF OPERATORS OF MINES**  
**SHOWN ON 1993 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY – Continued**

**CLAY/SHALE – Continued**

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
18	Holmes	Hs-77	IM-545	General Clay Products Corp.
19	Holmes	Hs-67	IM-3, IM-768	Holmes Limestone Co.
21	Jackson	Jkn-1001	IM-19, IM-336	Cedar Heights Clay Co.
22	Jackson	Jkn-1007	IM-24	Cedar Heights Clay Co.
23	Jackson	Jkn-367	IM-774, D-0273, D-0286, D-0594	Waterloo Coal Co., Inc.
24	Lawrence	Le-440	IM-828, IM-902	American Olean Tile Co., Inc.
31	Licking	Lg-501	IM-257	Bowerston Shale Co.
34	Mahoning	Mg-608	IM-4	E.M.A.I. Corp. (dba ESSROC Materials, Inc.)
36	Marion	Mn-7	IM-309	Glen-Gery Corp.
37	Medina	Ma-6	IM-455	General Clay Products Corp.
38	Muskingum	Mum-776	IM-256	Bowerston Shale Co.
39	Muskingum	Mum-24	IM-303	Midwest Portland Cement Corp.
41	Noble	Ne-66	IM-664	Towne Square Products
42	Paulding	Pg-1	IM-513	Lafarge Corp.
46	Perry	Py-212	IM-58	Ludowici-Celadon Co.
56	Tuscarawas	Ts-1517	IM-46	Belden Brick Co.
57	Tuscarawas	Ts-1646	IM-44	Belden Brick Co.
58	Tuscarawas	Ts-1841	IM-45	Belden Brick Co.
59	Tuscarawas	Ts-1939	IM-47	Belden Brick Co.
60	Tuscarawas	Ts-1960	IM-48	Belden Brick Co.
63	Tuscarawas	Ts-1818	IM-9	Kimble Clay & Limestone Co.
64	Tuscarawas	Ts-1884	IM-6	L & M Mineral Co.
65	Tuscarawas	Ts-1914	D-0701	L & M Mineral Co.
67	Tuscarawas	Ts-1557, Ts-1558	IM-52	Stone Creek Brick Co.
69	Tuscarawas	Ts-1928	IM-98	Sugarcreek Clay & Limestone, Inc.
71	Tuscarawas	Ts-540	IM-28	Zoar Mining Co.
73	Wyandot	Wt-7	IM-407	Claycraft Co.
76	Tuscarawas	Sk-235	IM-945	Holmes Limestone Co.
77	Columbiana	Ts-1982	IM-621	L & M Mineral Co.
79	Athens	Ca-947	IM-935	Dome Minerals, Inc.
81	Stark	As-594		Athens Hocking Reclamation Center
82	Ashtabula	Asa-14	IM-563	Janson's Soil Service, Inc.
85	Tuscarawas	Ts-520	IM-214	Blue Jay Enterprises of Tuscarawas Co., Inc.
86	Geauga	Gea-9	IM-132	Soltis Sand & Gravel
87	Athens	As-595	IM-1083	Cochran Transportation Services, Inc.
88	Coshocton	Cn-828	IM-1026	William Albert, Inc.
89	Erie	Ee-32	IM-1077	Speer Brothers, Inc.
90	Greene	Ge-44		Southwestern Portland Cement Co.
91	Jackson	Jkn-CH	IM-1060	Cedar Heights Clay Co.
92	Lake	Lke-M	IM-1059	Mitchell Transport, Inc.
93	Lawrence	Le-B	IM-1072	Belville Mining Co., Inc.
98	Perry	Py-N	IM-1097	Nutter Bros. Coal Co., Inc.
99	Pike	Pke-26	IM-142	Valley Materials Co.
101	Preble	Pre-9	IM-1095	Loxley Aggregates, Inc.
102	Stark	Sk-HC	IM-1037	Hillcrest Coal, Ltd.
103	Tuscarawas	Ts-2024	IM-1087	Green Basin Coal, Inc.
104	Wood	Wd-13	IM-998	G. M. Sader Excavating & Paving, Inc.
105	Belmont	Bt-1190	IM-1089	Frank Widmor Coal Co.
106	Columbiana	Ca-970	IM-1024	M & M Builders Supply Co.
107	Mahoning	Mg-EM	IM-1056	E.M.A.I. Corp. (dba ESSROC Materials, Inc.)
108	Perry	Py-338	IM-1092	Dennis Clay Co.
109	Harrison	Hn-B	IM-1020	Bowerston Shale Co.
110	Hocking	Hg-330	IM-1013	General Clay Products Corp.
111	Holmes	Hs-96	IM-997	Jeff Chaney
112	Muskingum	Mum-24	IM-830	Midwest Portland Cement Corp.
114	Richland	Rd-R	IM-1035	Richland Moulded Brick Co.
116	Portage	Pe-61	IM-1064	Red Brush Peat Co.
118	Mahoning	Mg-631	IM-1103	East Fairfield Coal Co.
120	Butler	Br-56	IM-1137	S. K. Construction Co.
121	Lawrence	Le-445	IM-1140	White Eagle Mining Co., Inc.
122	Muskingum	Mum-904	IM-1127	Valley Clay Mining Co.
123	Stark	Sk-246	IM-1114	American Landfill, Inc.
124	Muskingum	Mum-903	IM-1115	Dennis Clay Co.



**NUMERICAL INDEX OF OPERATORS OF MINES  
SHOWN ON 1993 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY — Continued**

**CLAY/SHALE — Continued**

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
126	Stark	Sk-217	IM-750	Waste Management of Ohio, Inc.
127	Columbiana	Ca-989	IM-1110	Summitville Tiles, Inc.
128	Athens	As-533	IM-17	R. A. Eberts Co., Inc.
129	Carroll	Cl-B	IM-1165	Buckeye-Industrial Mining Co.
130	Columbiana	Ca-348	IM-976	D. & D. Mining Co.
131	Columbiana	Ca-DM	IM-919	David McCourt Mining Co.
133	Jefferson	Jfm-PE	IM-1162	Penn Eagle Coal Corp.
134	Lawrence	Le-T	IM-1172	Tri-State Clay & Coal Co., Inc.
135	Mahoning	Mg-632	IM-808	Solomon's Mines, Inc.
136	Ottawa	Oa-BW	IM-1153	Brush Wellman, Inc.
137	Perry	Pg-344	IM-1014	Central Silica Co.
138	Perry	Py-S1	IM-1183	Swingle Drilling, Inc.
139	Pickaway	Pke-D	IM-1150	Darby Gravel Co.
141	Stark	Sk-245	D-0653	Buckeye-Industrial Mining Co.
142	Tuscarawas	Ts-MMO	IM-1166	M & M Operating
143	Wayne	Hs-79	IM-656	Holmes Limestone Co.
144	Wayne	We-R	IM-690	Rash Energy, Inc.
145	Jackson	Jkn-CH1	IM-1182	Cedar Heights Clay Co.
146	Stark	Sk-247	D-0929	Buckeye-Industrial Mining Co.
147	Tuscarawas	Ts-B	IM-49	Belden Brick Co.
148	Knox	Kx-K	IM-870	Board of Knox County Commissioners
149	Perry	Py-K	IM-851	Kieco Sand & Shale
150	Ross	Rs-T	IM-1189	Tackett Builders
151	Tuscarawas	Ts-H1	IM-927	L & M Mineral Co.
152	Washington	Wn-M	IM-1163	M & J Sand & Gravel, Inc.
153	Champaign	Cpn-20	IM-482	Moore's Excavating Co.
154	Coshocton	Cn-JTM	IM-1199	JTM Industries, Inc.
155	Fairfield	Fd-16	IM-1156	James E. Downard
156	Lucas	Ls-13	IM-492	Seaway Sand & Stone, Inc.
157	Montgomery	My-CW	IM-878	Carter & Carter, Inc.
158	Montgomery	My-W	IM-1207	Weidle Sand & Gravel, Inc.
159	Perry	Py-DCC	IM-1192	Dennis Clay Co.
160	Pike	Pke-J	IM-1194	John James Estes & Assoc., Inc.
161	Portage	Pe-89	IM-1142	Green Oaks Potting Products, Inc.
162	Stark	Sk-BE	IM-1202	Beaver Excavating, Inc.
163	Washington	Wn-F	IM-1208	David L. Florence
164	Columbiana	Ca-888	IM-1181	D. & D. Mining Co.
165	Wayne	We-25	IM-1209	Craigton Shale Co.

**SALT ■ ■**

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
1	Cuyahoga	Cya-30		Akzo Salt, Inc.
2	Lake	Lke-6		Morton International, Inc.
3	Licking	Lg-45		R. H. Penick Co.
4	Summit	St-9127		Akzo Salt, Inc.
5	Wayne	We-9129		Morton International, Inc.

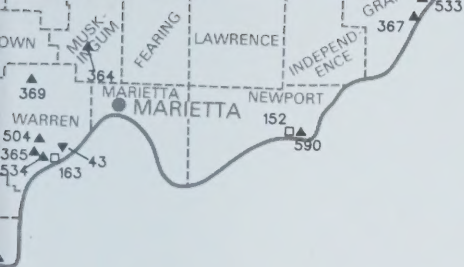
**GYPSUM ◆**

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
1	Ottawa	Oa-2	IM-344	Celotex Corp.

**NUMERICAL INDEX OF OPERATORS OF MINES**  
**SHOWN ON 1993 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY – Continued**

**PEAT** ◇

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
1	Ashland	Ald-13		Mohican Organic Products, Inc.
2	Champaign	Cpn-9		Sphagnum Moss Peat Farm
4	Williams	Ws-17		Lingvai Peat Co.
7	Portage	Pe-89	IM-1142	Green Oaks Potting Products, Inc.
9	Portage	Pe-61	IM-1064	Red Brush Peat Co.



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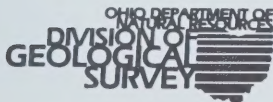
STATE OF OHIO  
George V. Voinovich, Governor  
DEPARTMENT OF NATURAL RESOURCES  
Frances S. Buchholzer, Director  
DIVISION OF GEOLOGICAL SURVEY  
Thomas M. Berg, Chief

# MINERAL INDUSTRIES MAP OF OHIO

1993

COMPILED BY  
SHERRY L. WEISGARBER

This map is based on operators listed in the 1993 *Report on Ohio mineral industries* and is intended for general reference. Assistance with locations was received from the Ohio Department of Natural Resources, Division of Reclamation.



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- MINES, QUARRIES, AND PREP PLANTS**
- Coal, underground
  - Coal, strip
  - Coal, prep plant
  - Gypsum
  - Limestone/dolomite
  - Peat
  - Salt brine
  - Salt rock
  - Sand and gravel
  - ▲ Sand and gravel dredging operation
  - Sandstone/conglomerate
  - Shale/clay

Locations are approximate. Numbers opposite symbols are map-location numbers assigned to operators listed in the alphabetical directories of the Division of Geological Survey's *Report on Ohio mineral industries*. The operator of a mine or quarry may be determined from the directories by use of the map-location commodity symbol, number, and county name. A list of operators by commodity and map-location number is also provided.

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# MINERAL INDUSTRIES MAP OF OHIO

1993

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CARTOGRAPHER: MICHAEL R. LESTER

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